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ORIGINAL ARTICLES.

THE KOCH TREATMENT COMBINED WITH SURGICAL PROCEDURES.[1]

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ARTICLE II.—THE SURGICAL PROCEDURES AS APPLIED TO TUBERCULOSIS OF THE GLANDS, BONES AND JOINTS.

Surgeons naturally seem to be of different opinions as to the procedures which are indicated in surgery of tuberculous bones, joints and glands, when they have been subjected to the Koch treatment.

I will attempt in the following, with the help of a few specially selected cases, to outline our principles in the treatment of such patients.

First of all, it is absolutely necessary to have a perfect understanding of the action of the remedy, for numerous complications often arise during the course of the treatment which have the greatest influence upon the temperature curve as well as upon the wound conditions.

The fever curve indicates exactly whether or not the action of the Koch remedy is free from contemporaneous influence. When the temperature rises rapidly after the injection and on the following day the fever subsides, we know that these fluctuations of temperature are attributable to the remedy alone.

Patient Kalow, age 18, received in Moabit Hospital July 12, 1890, had resection for disease of the right hip-joint on the 17th of July. The wound was completely cicatrized by the beginning of November; he first reacted in a typical manner on the 25th of November, after injection of 4 mg. Thenceforth he was treated with increasing doses, and each time showed typical reaction. During the treatment the cicatrix showed intense redness, was very painful but did not break open. With the subsidence of the reactions the local disturbances improved; the patient is now entirely well and goes about; he receives from time to time, as an additional security against relapse, the larger doses of 1 dg.

But there occur deviations from this typical behavior of the temperature curves, and when, more especially, the morning remissions do not again reach the normal, one can be sure that this action of the temperature is conditioned by inter-current complications. These comprise, first of all, the retentions, which are a result of the greatly increased secretion following the action of the remedy.

This can be best observed in operation wounds that have not completely healed or have left fistulas.

These retentions demand immediate free incision and drainage of the cavities, and if necessary, removal even of bones and joint-end, and this is the more necessary because there is, besides the effect of the retentions themselves, a decomposition of the secreted material.

Patient Hasse, age 10, admitted September 11, 1890; *coxitis dextra;* secondary abscess; incision September 13, 1890. There remains a wound surface on the anterior aspect of the thigh which secretes moderately; joint changes are not demonstrable under chloroform narcosis. Patient was subjected to the Koch treatment November 22. After the second injection already there was an irregular rise of the temperature to a great height, with deterioration of the general condition. December 5, the wound was enlarged under chloroform narcosis—as owing to the increased secretion there had occurred some retention of pus—and a sufficiently free drainage for the secretions was established. The temperature now returned to normal; general condition improved, and the appetite, which had been entirely lost, returned. (For result of bacteriological investigations of the wound secretions—*vide* below.)

After the enlargement and drainage of the wound the temperature showed the typical reaction.

The patient now, the beginning of January, receives at intervals injections of 1 dg. The wound on the anterior aspect of the thigh shows but slight suppuration; movements of the hip-joint painless; patient reacts only after large doses.

A quite similar condition appears in the following:

Patient Rueklicke, age 14, admitted in hospital

[1] Authorized translation by Jno. R. McDill, M.D., of Milwaukee, Wis., now in Berlin.

May 8, 1890, for *coxitis dextra;* lungs unaffected. October 24, resection; *caput femoris* completely destroyed; acetabulum perforated. Before the resection wound had quite healed the injections were begun, November 22, but the morning temperature did not fall to normal in the typical manner. The symptoms after the first two doses consisted of slight sense of heat, some redness and sensitiveness to touch about the margins of the wound and a little headache. Without injections the high temperature persisted during the following days; the wound became painful and general condition grew worse. Believing there was again secretion retention in the depths of the wound it was enlarged, and it immediately gave exit to considerable pus. (Bacteriological investigations of this pus showed staphylococcus pyogenes aureus in pure culture.) A large drain was introduced and the general condition rapidly improved, pains decreased, appetite returned and temperature gradually subsided and reached normal on the third day after the operation. Injections resumed December 5. The first two doses gave marked reactions and very profuse suppuration from the drained wound; then followed larger doses without marked reactions. On the days when no reaction occurred the temperature remained perfectly normal. The second bacteriological examination showed great quantities of staphylococcus pyogenes aureus, besides scattered forms of other bacteria.

This patient is now, at the beginning of January, perfectly cured.

Another case of the temperature being influenced by retentions is the following, which besides shows a number of peculiarities.

The patient Hewart, age 15, was admitted June 9, 1890, on account of *coxitis dextra*.

The patient comes of tuberculous family; says that several years ago he expectorated blood, but never suffered otherwise from anything like lung trouble. The coxitis began when two years of age. Resection of joint in 1883; fistulas formed in the cicatrix during the next few years. Re-resection September 30, 1890, on account of destruction of acetabulum; removal of sequestra; drainage. November 22 injections were begun before the wound was healed. Examination of lungs at that time showed a very slight change only in the left infra-clavicular fossa; no râles; no expectoration.

The rises of temperature occurring after injections of small doses, which seemed to call forth general and local reaction, are again owing to retentions. On December 2 the wound was enlarged and again drained; large quantity of pus escaped. (Bacteriological investigation of pus shows staphylococcus pyogenes albus.) After this the general condition improved and the fever subsided, but very soon returned and the cause was found in the lungs. On December 7 the cough and expectoration recurred; tubercle bacilli were present in the sputa in considerable quanity. Some few bacilli had been found in the fluid or liquid expectoration as early as the 24th of November. Râles were found to be increased in the left infra-clavicular fossa. Injections had been made from the 4th to 8th of December, when they were discontinued that the uninfluenced temperature might be observed. Repeated hæmoptysis since December 12. A short time ago we were again enabled to resume the injections and now the dangerous symptoms begin to disappear.

Every retention of pus or secretion matters must have quite the same influence on the temperature, and cause fear, whether the secreted matter accumulates beneath the crusts of lupus or in the caverns of the lungs. This is shown in the case of the 51-year old patient, Neumann, (lupus faciei et scapulæ).

In this case, after the first injection, unusually copious exudations, partly pus, appeared, the dried superfices of which formed crusts; the accumulation of secretion thereby caused was evidently the reason of slow temperature decline from the 25th to 29th of November, because, after we had removed these crusts, by soaking with compresses saturated with acetate of aluminum solution, typical reactions occurred after the injections; that is to say, there was absence of temperature on the very next day.

Now, it is *not alone the retentions* which cause fever, but also the decompositions (mixed infection) resulting from secondary infection. For in the increased secretion is provided for cocci a favorable soil for growth, and if surgical interference is not soon employed, even septic conditions may arise.

In such circumstances, most likely, is to be sought the explanation for the "pyrogenic feverish after-effect" ("fieberhafte pyrogene Nachwirkung") of the remedy, mentioned by some authors. When, therefore, for instance, consumptives with lung caverns have a fever persist after injections, it is probably often owing to stagnation and decomposition of the secreted materials within the cavities.

In the case of the patient Hasse (*vide* above), after the exits from the wound had been enlarged, the examination of the wound secretion from the upper fistula, leading to the pelvis, resulted in a pure culture of staphylococcus pyogenes albus, from the lower fistula leading around the trochanter—a streptococcus. At this time, January 20, the difference in the natures of these two cocci is clinically illustrated by the fact that the upper (staphylococcus) fistula has healed, but the lower (streptococcus) still persists. In the case of the patient Hewart, likewise a staphylococcus pyogenes albus; in the case of the patient Rueklicke, above mentioned—staphylococcus pyogenes aureus.

Quite the same conditions will therefore be observed in other (serous) cavities; whenever retentions occur there is infection-opportunity *through communication from without.* In the presence of such complications the effect of Koch's remedy must be prejudiced, until the removal of the disturbing element is accomplished. In this respect the following case is very instructive:

Pauline Schmidt; tuberculosis of the peritoneum. I had already performed laparotomy on October 16, but the operation was followed by no improvement worth mentioning. At the time, 8 litres of a light-colored serous fluid were removed. On neither omentum nor intestines were tuberculous nodules then visible.

For diagnostic purposes, two guinea pigs were inoculated by injecting into the peritoneal cavity of each 1 ccm. of the ascitic fluid. The animals appeared ill during the first few days, but they soon perfectly recovered. Four weeks after they had the appearance of perfectly sound animals, and four weeks later the autopsies showed no tuberculosis.

The effusion rapidly reformed in the patient. It was removed three times by aspiration. Otherwise her condition remained unaltered. The anæmia and emaciation greatly increased; the abdomen was much distended, the temperature normal, pulse small, lungs showed nothing abnormal, no cough.

On November 24 the first injection of 1 mg. of Koch's lymph was administered, but no reaction followed; on 25th, 2 mg.; great sense of tension in the abdomen, with a marked general reaction. Through the last puncture wound escaped a considerable quantity of a light-brown colored and somewhat turbid serous fluid (compression bandage).

Also during the following days, the fever continuing, the exudation increased to such an extent that punctures had to be repeated several times. Careful examination of the peritoneal fluid shows: A quite clear liquid, which upon standing deposits a very thin layer, resembling pus; in it are found quantities of tolerably well preserved leucocytes and occasional endothelia. Some show greatly enlarged neucleoli, in others there is a yellow, lumpy pigment. Tubercle bacilli not found. Two guinea pigs were inoculated with the exudation fluid. The bacteriological investigation proved the existence of staphylococcus pyogenes aureus (secondary infection).

On December 5 the patient was again laparotomized. Operation was very tedious and bloody, owing to extensive adhesions between omentum and the old cicatrix. The omentum had to be ligated. Tuberculous nodules were visible on the mesentery and portions of the intestinal serosa. Fibrinous deposits. The right tube feels thickened. The wretched and extremely reduced patient died soon after. Result of post-mortem: Old tuberculosis of the peritoneum, which had recently led to a dense crop of nodules, mainly in the inferior portions. Evidences of recent suppurating peritonitis. In addition there was typical cirrhosis of liver—not tuberculous in origin. Lungs intact. Thickening of right tube was caused by overlying fibrin; mucous membrane and tissue normal.

Bacteriological examination of the fluid, etc., removed at the last operation, results, in one of the three tubes of agar inoculated with the liquid, in four colonies of staphylococcus pyogenes aureus. In contrast to this fluid, which is almost free of bacteria, are the two plates of agar, which were inoculated with the fibrin coagula, showing staphylococcus pyogenes aureus in great quantities and in pure culture.[2]

After reviewing what has been so far discussed, it is our opinion, that in a number of surgical tuberculoses which have open wounds or fistulæ, Koch's remedy, by means of tissue necrosis and increased secretions, together with outward communication of the wound cavities, frequently calls forth changes in the diseased parts which, if surgical interference is not employed, may lead to manifold complications. The action of the remedy can be, thereby, at times completely nullified. Only by the aid of surgical procedure can the typical action and curative effect of the remedy prevail.

Recognizing these circumstances, we have succeeded, up to this time, in effecting perfect cures in some of our surgical cases—*e. g.*, such was the case in the 4-year old patient, Emil Drateva. He suffered from osteitis tuberculosa multiplex. He was under our care since last April, and repeated curettings and incisions had been performed. The injections were begun on November 24.

The reactions in the beginning showed only slight deviations, owing to new abscess formation. On November 26 occurred great swelling and marked sensibility to touch, of the right ankle-joint, which up to that time had been considered as healthy because it had shown no untoward symptoms. In this case we were able to increase the dose rapidly. The reaction ceased completely at 15 mg., and now 5 cg. gives no reaction. The cicatrices on the hands and feet, as well as the right ankle-joint, are entirely painless. The patient goes about and feels very well.

In other patients who had wounds or fistulæ, and in whom large doses caused no reaction, the wounds, fistulæ or glands remained notwithstanding. I should like to remark here, that on tuberculous glands, especially, the effect of the remedy is comparatively slow. The explanation is, probably, that the remedy gains access so gradually

[2] The guinea pigs, intraperitoneally inoculated on December 3, appeared to be very ill during the first few days after the injections, but completely recovered (corresponding with the fact that the bacteriological examination of the exudated fluid showed that the fibrin coagula, not the fluid, contained the cocci).

and slowly on account of the encapsulation and the cheesy nature of these deposits. As a matter of course the surgeon has again to interfere in all cases where the self-help of the organism is insufficient to remove the necrotized tissue.

Hence, in all cases in which reaction after large doses repeatedly fails, fistulæ, unhealed wounds and joints must be most carefully and completely excised; we have thereby gained very satisfactory results. These patients, however, for assurance' sake, receive large doses of the Koch remedy (1 dg. for each adult, at intervals of from eight to fourteen days). This after-treatment will be continued weeks or months according to the case.

I can, therefore, from recent experience, maintain the principle that, in surgical tuberculosis, the practitioner will have more occasion now than ever before to resort to the knife, and then only will he achieve brilliant results from the Koch treatment. Here least of all is it permissible to limit one's self to the Koch injection according to any prescribed method, for the highest demands of the surgical art must always be kept in view.

A HISTORICAL RECORD OF THE DEVICES USED IN THE MECHANICAL TREATMENT OF SIMPLE FRACTURE OF THE PATELLA.

Read before the Clinical Society of the Chicago Policlinic, October 14, 1890.

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In the entire domain of surgery there is not a fracture which has interested more prominent surgical minds, or been the subject of more devices and inventions for its treatment, than this; and in order to present an accurate and comprehensive history, the writer has been obliged to extract freely from foreign authorities, as well as those who have written upon the subject in our own language.

Abulcasis[1] and Paul of Aegina were the first to mention fracture of the patella in their writings. Their treatment was most simple. The former bound down the upper fragment with a bandage; the latter fastened the fragments together with an emplastrum, which with a round splint was held in place by a bandage. Both writers considered the extended position of the limb a necessity. It is unfortunate that no illustrations can be obtained depicting their methods.

Guido, Theodorich,[2] Giul. de Saliceto and Brunschwig recommended plasters, splints and bandages, and even Paré considered the subject briefly and with no positive directions for treatment. He suggested that compresses be laid in the popliteal space, and splints of straw used to prevent flexion. Paré asserted that he had never effected a cure without deformity, a limp always remaining in the patient's walk. This assertion seems to have acted as a spur to surgical invention, and was followed by many devices to overcome the difficulties to which he referred. Peccetti (1557) attempted to fasten the fragments together with a leather ring which was held in place by a bandage. More complete was the invention of Muschenbroek, a mechanic of Leyden.

This is described by Solingen[3] and mentioned by Garengeot,[4] who drew attention to the favorable comment it had occasioned in France, although it had been claimed by Arnaud, though he neither invented it nor brought it personally from Germany. Muschenbroek's apparatus consisted of two steel plates padded, and these were screwed on to a frame of the same material, and by means of straps the fragments were kept in approximation (See Fig. 1).

The next important form of apparatus was devised by Purrmann,[6] and consisted (See Fig. 2) of an iron ring, covered with leather and secured in place by straps.

The first complete monograph upon the subject of fracture of the patella was written by Dr. H. Meibom[6] (1697), and in this dissertation he described the method and splint invented and advocated by his father.

This consisted of a padded cap that encircled the fragments, and could in its upper part be opened and closed at will. The *eighteenth* century was very rich in contrivances to effect union.

Petit used a form of gutter padded with Hungarian leather (Fig. 3), which was provided with side slots in which the bandages were fastened. He used two bandages, in the middle of each of which were sewed semicircular padded compresses which crossed above and below the fragments, and Verduc[7] (1711), Henckel (Fig. 4), Bass[8] (Fig. 5), Eschenbach[9] and others, used compresses and many-tailed bandages in various forms. Kaltschmidt[10] used a linen crown covered with a wooden capsule with a square opening at the top (Fig. 6).

Valentin[11] (1772) was the first to draw attention to the value of placing the limb in a satisfactory position by relaxing the extensors, and elevating the foot so as to approximate the fragments.

Theden[12] soon after drew attention to the inefficacy of the ring and other forms of compressing apparatus, and strongly advocated the position treatment of Valentin. Theden was the first to place the limb in a box, the lower end of which was elevated to maintain the extension, and the fragments were held together by circular loops and bandages.

Bell[13] (Fig. 7) used two heart-shaped compresses finished in leather, connected together by two girths, one of which passed around the limb above the knee and the other below. These compresses were drawn together by other straps, the fragments of the patella being between them, and

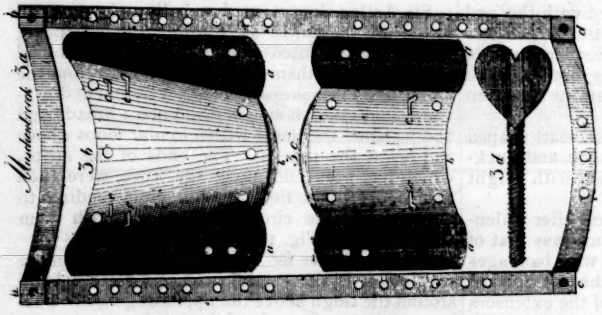


Fig. 1.—Muschenbroek's (1648) apparatus.

Fig. 2.—Purrmann (1685).

Fig. 3.—Petit.

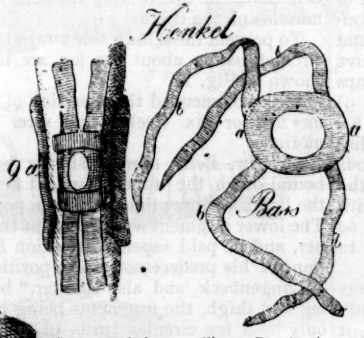


Fig. 4.—Henkel.

Fig. 5.—Bass (1732).

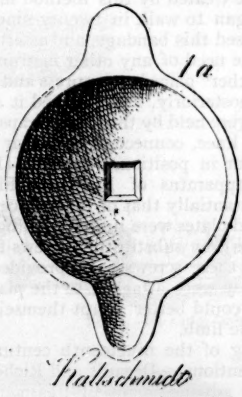


Fig. 6.—Kaltschmidt (1784).

Fig. 7.—Benjamin Bell (1769).

Fig. 8.—Bücking (1769).

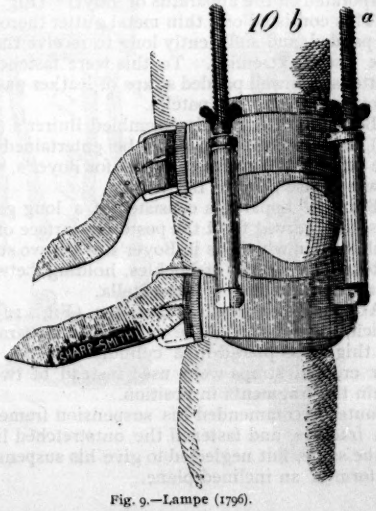


Fig. 9.—Lampe (1796).

the upper compress was connected with the end of the shoe by a long anterior strap which was intended to prevent flexion and displacement of the upper fragment. The leg was directed to be retained in position in this apparatus fourteen days.

Zenker changed the form of these heart-shaped compresses into that of the horse-shoe, and Bucking[14] (Fig. 8) and Evers followed with slight modifications.

The next important improvement after Valentin's in the treatment of this fracture was that of Souville.[15] He bound the thigh with bandages from the hip downward, and from the foot upward to the knee, to control the action of the extensors and overcome the swelling of the knee-joint. He reports one case treated by this method in which the patient began to walk in twenty-nine days. Richter[16] also used this bandage, and asserted that he never felt the need of any other instrument or dressing. Böttcher[17] placed a compress and spoon-shaped splint posteriorly, and fastened it so that the fragments were held by the girth straps above and below the knee, connected by linear straps which kept them in position. Lampe[18] (Fig. 9) modified the apparatus of Bucking (Fig. 8), which was substantially that of Bell (except that the heart-shaped plates were united by hinge rods instead of straps), by substituting screws for the hinge rods, and these screws were provided with pivots where they were attached to the plates, so that the latter could better adapt themselves to the curves of the limb.

The beginning of the nineteenth century was also rich in inventions. Desault and Richerand[19] were the first to advance plans of treatment, but the essential principles of their methods were incorporated in the apparatus of Boyer[20] (Fig. 10). This consisted of a thin metal gutter thoroughly padded, and sufficiently long to receive the entire lower extremity. To this were fastened by buttons two well padded straps of leather passing above and below the patella.

Boyer's gutter greatly resembled Buirer's (Fig. 11), and the suspicion could be entertained that the latter had served as a model for Boyer's, since it was in use prior to 1801.

Buirer's[21] apparatus consisted of a long gutter or splint, carved to fit the posterior surface of the limb, and in which, as in Boyer's, were two straps fastened by means of buckles, holding between them the fragments of the patella.

Assalini[22] contrived a dressing (Fig. 12) in which, in addition to the rest of the apparatus, the thigh was placed in a cylindrical splint, and four crossed straps were used instead of two to retain the fragments in position.

Sauter recommended his suspension frame for this fracture, and fastened the outstretched limb on the same, but neglected to give his suspension the form of an inclined plane.

Sir Astley Cooper used a hollowed splint, allowed the patient to sit upright, the heel being elevated, and waited until all inflammation had subsided. He then bandaged the limb from the foot to the knee, pressed the upper fragment downward, laid on each side of the knee a broad band and fastened the same with circular loops above and below the patella. The ends of the strips, which had been laid along the knee, were then turned over and tied together, thus tending to approximate the circular loops, and with them the fragments (Fig. 13).

Another device for which he claims still more excellence, is the employment of a leather band around the thigh above the upper fragment. This is connected to the sole of the foot by straps passing down each side of the leg, which is maintained in an elevated and outstretched position (see Fig. 14). This was contrived with the evident object of overcoming the contractility of the muscles of the thigh.

To prevent these long side straps from slipping, circular bands about the leg are to be used as shown in Fig. 14.

He recommended the retention of this position for five or six weeks, and after this passive motion.

Sir Chr. Bell[23] used a simple bandage. He bound down the upper fragment first by passing the bandage under the knee in the popliteal space. The lower fragment was treated in the same manner, and he paid especial attention to the directions of his predecessors as to position.

Langenbeck, and also Richter,[24] bound up the leg and thigh, the fragments being held together only by a few circular turns of the ends of the bandage. They did not use an inclined plane, but instead had the patient sit in an upright position. Dupuytren[25] used a very simple bandage to maintain the fragments in position, and placed the limb on an inclined plane.

Von Graefe[26] (1824) was the first to devise a splint for this fracture, provided with joints at the side. (Fig. 15). It consisted of two semi-circular troughs made of sheet iron and properly padded, united by two lateral hinge joints. The splint is fastened to the limb by means of four girths, two of which are placed on the upper half and two on the lower half of the splint. Union of the fragments is sought to be accomplished by means of two linear straps connecting the middle transverse ones.

Amesbury's[27] apparatus consisted of two leather cushions, the larger being placed over the upper fragment of the patella, and the smaller one the lower, so that after being buckled together they hold the fragments between them. From the upper cushion a strap passes down along the leg to the sole of the foot, under the same and back again up the other side of the leg to the opposite side of the same cushion, to which it is then

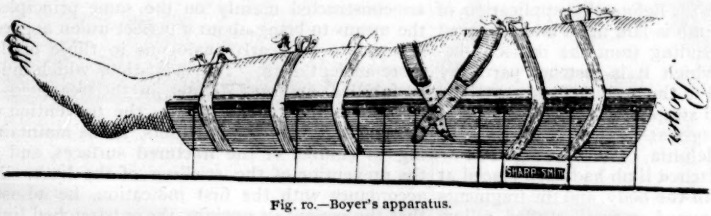


Fig. 10.—Boyer's apparatus.

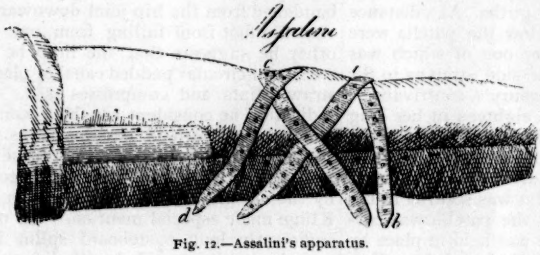


Fig. 12.—Assalini's apparatus.

Fig. 11.—Buirez's apparatus.

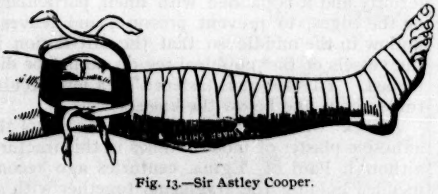


Fig. 13.—Sir Astley Cooper.

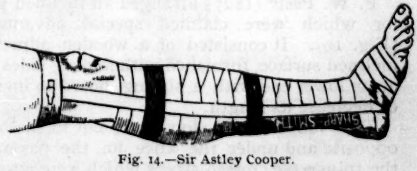


Fig. 14.—Sir Astley Cooper.

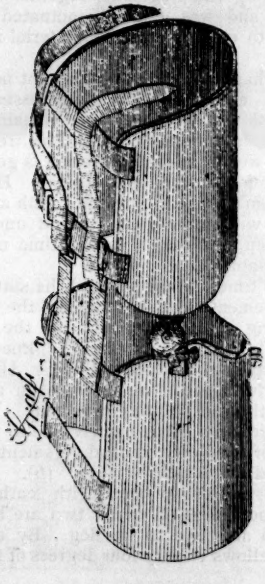
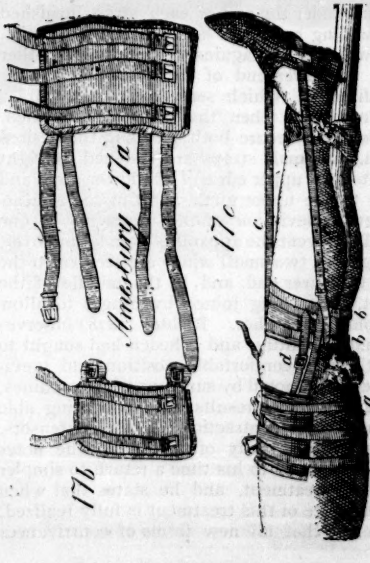


Fig. 15.—Von Graefe (1824).



Figs. 16.—Amesbury (1825). Fig. 17.—Amesbury's apparatus applied.

buckled. (Fig. 16). Before the application of the cushions, the limb is laid upon a long carved wooden splint, extending from the os ischii beyond the heel, to which it is fastened partly by the straps attached to the cushions and partly by other bandages and straps. (Fig. 17).

A similar dressing was next invented by J. L. Rosseaú, of Philadelphia, (1826). (Fig. 18).

After the outstretched limb had been placed at an obtuse angle with the body, and the fragments had been approximated, a small stuffed pillow was placed against the upper fragment and fastened there by straps and girths. At a distance of two inches above and below the patella were placed two girths, the upper one of which was connected to the foot by a side strap as in Sir Astley Cooper's and Amesbury's contrivances, already described. A splint eighteen inches long was next placed under the limb, its centre being under the popliteal space, and on each side of this splint there were narrow slots for the side straps to pass through. This splint was secured to the limb by roller bandage and the patella was covered with a compress which was held in place by another girth encircling the limb and the splint.

F. W. Fest[29] (1827) arranged an inclined plane for which were claimed special advantages. (Fig. 19). It consisted of a wooden adjustable inclined surface, furnished with folding sides, and at its lower end with a sliding board to increase or decrease its length.

Two longitudinal slots were cut in the board opposite and under the knee for the passage of the transverse crossed straps which were intended to keep the fragments in apposition.

To and under the end of each strap furnished with buckling holes, are fastened padded girths, one of which is laid against the upper, the other against the lower end of the patella in a horizontal direction, which serve to hold the fragments in position when the straps are buckled. To more firmly secure both girths in the desired position, two small straps are fastened at right angles to the upper edge of the lower girth and secured to the upper girth, and thus, in a measure, prevent deviation of the fragments to one side. To prevent the apparatus from falling over, two large and two small wings are secured to the side of the lower end, and in the middle of the foot-rest, these being joined by hinges to allow their folding together. Richter (1828) observes that what Valentine and Theden had sought to attain through comfortable position had previously been attempted by surgeons with machines, without satisfactory results, they not being able to prevent the contraction of the extensors. From an historic study of the subject he notes how one sees even in his time a return to simpler methods of treatment, and he states that when the importance of this treatment is fully realized, and the fact that all new forms of contrivances are constructed mainly on the same principles, the means to bring about a perfect union are recognized to be nearly analogous to those of the more ancient days. The indications which must be fulfilled, observes Richter, in the treatment of fracture of the patella, are 1, the prevention of the contraction of the extensors, 2, the maintaining in contact of the fractured surfaces, and 3, the prevention of the swelling of the limb. In accordance with the first indication, he advises that the patient sit upright, the outstretched limb to be placed on an inclined plane, and the thigh bandaged from the hip-joint downward. To prevent the foot from falling from one side to the other he suggests that the limb be placed in a steel semi-circular padded canal or placed between straw splints and compresses used. The second indication he considers can be accomplished by winding bow-formed circular turns of bandage above and below the patella, these being connected together in the popliteal space; or again by the use of the "Testudo Inversa," of which Klüge made especial mention. To obtain this a sufficiently long pasteboard splint is laid posteriorly and it is padded with linen, particularly on the edges, to prevent pressure, and leaves a hollow in the middle so that the circulation in the vessels of the popliteal region cannot be disturbed. This splint is fastened by a few circular turns above and below the knee.

Alcock[30] was the first to advocate the use of the adhesive plaster of modern times in this fracture, although Paul of Ægina, centuries ago recommended holding the fragments together with an emplastrum, and was evidently actuated by the same desire to employ adhesive material in their retention.

A hæmorrhagic condition of the joint need not prevent the application of this dressing, but Alcock directs that the knee must remain free if the swelling is inflammatory. The treatment lasts several weeks, and its duration is governed by the individuality of the patient. He considers that four weeks might suffice with a young person, but with older patients and under unfavorable circumstances, a longer time must be deemed advisable.

The given time having elapsed, he states that passive movements can be allowed, the patient still remaining in bed, and not until the patient has acquired skill in moving the knee must crutches be used to practice walking. He must exercise gradually until he depends on a stick, and only in the end do away with that. Richter draws attention to a useful contrivance to prevent the tearing of the newly formed ligamentous tissue, invented by Baillif.[31] (Fig. 16). It consists of four portions of steel with leather, and padded on the inside, of which two are buckled to the thigh and two to the leg. By a point which only allows twenty-four degrees of flexion,

Fig. 18.—Rousseau (1826).

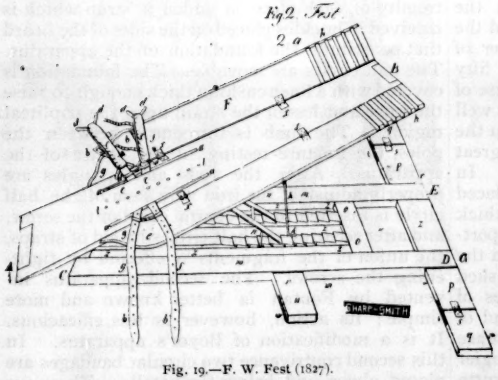


Fig. 19.—F. W. Fest (1827).

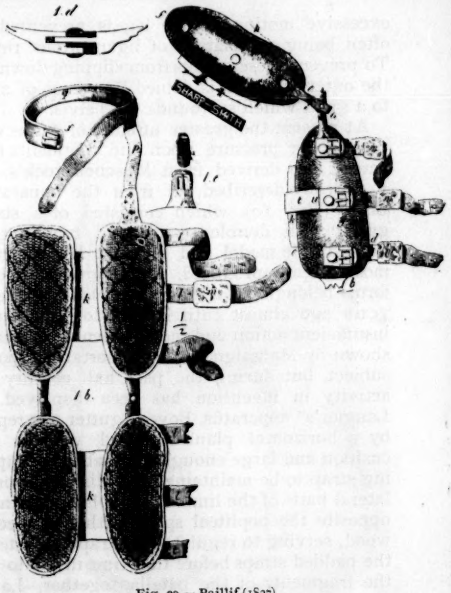


Fig. 20.— Baillif (1827)

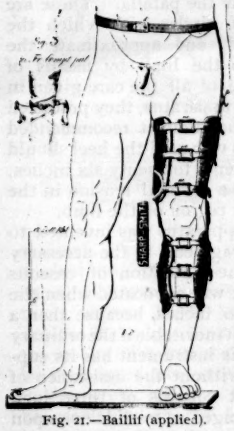


Fig. 21.—Baillif (applied).

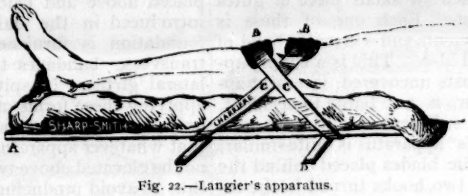


Fig. 22.—Langier's apparatus.

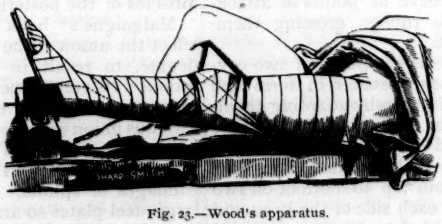


Fig. 23.—Wood's apparatus.

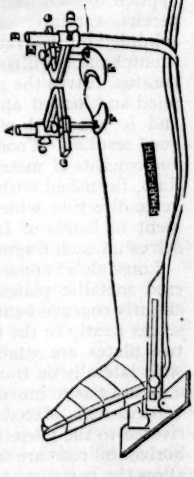


Fig. 24.—Lonsdale's apparatus.

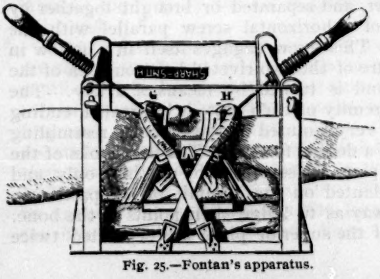


Fig. 25.—Fontan's apparatus.

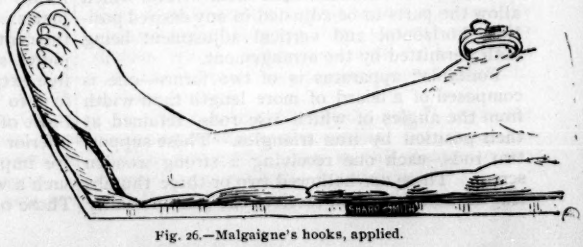


Fig. 26.—Malgaigne's hooks, applied.

excessive motion of the leg is prevented, this often being a causation of ligamentous rupture. To prevent these splints from slipping downward, the outer segment is joined by means of a strap to a girth which surrounds the pelvis.

At present the greater number of forms of apparatus for pressure upon the fragments of the patella are derived from Muschenbroek's, (Fig. 1), already described, or from the apparatus of Boyer (Fig. 10), which consisted of a straight gutter with double straps, and represents the most simple model and the best known and the most often reproduced. The great number of forms belonging to these two classes were fifty years ago almost entirely abandoned because of insufficient action and inconvenience, as was well shown by Malgaigne in his dissertation upon the subject, but during the past half century great activity in invention has been displayed. In Langier's[32] apparatus, Boyer's gutter was replaced by a horizontal plank covered with a thick cushion and large enough to enable the supporting strap to be maintained at a distance from the lateral parts of the limb. This plank is furnished opposite the popliteal space with two pieces of wood, serving to regulate the straps. Instead of the padded straps before that time in use to brace the fragments of the patella together, Langier applied to each fragment a small piece of gutta percha carefully cast. Each one of these is solidified on the fragments and a circular band of caoutchouc is utilized also. This is a simple apparatus, leaves the parts uncovered, is easily applied and looked after, is not liable to accident, and is possessed of sufficient qualities to give good results. Wood's[33] apparatus is quite similar, and consists of metallic blades placed behind the limb, furnished with two hooks turned in the inverse direction which serve as points of attachment to bands of India rubber, crossing themselves on each fragment.

Lonsdale's[34] apparatus is composed of two covered metallic plates, semi-circular in form and slightly concave beneath, thereby adapting themselves nearly to the form of the patellæ. These two plates are attached to iron supports which slide laterally on transverse bars arranged in such a manner as to move from top to bottom on two vertical rods, placed on each side of the knee and riveted to the posterior blade. The supports and horizontal rods are furnished with screws which allow the parts to be adjusted in any desired position, horizontal and vertical adjustment being both permitted by the arrangement.

Fontan's[35] apparatus is of two forms—one is composed of a board of more length than width from the angles of which rise rods, retained at their position by iron triangles. These support two rods, each one receiving a strong wooden screw. These are hollowed two or three thumbs length, and this canal receives the free extremity of a strong iron wire surmounting the two half circles. The last named are important pieces of the apparatus, and press on the superior and inferior parts of the patella. These operate reversely, and their pressure is augmented or diminished as desired by tightening or loosening the wooden screws. To prevent their sliding on the fragments, a slight curvation is imparted to the stem of the wire which supports them, and to still further insure a good result, to the extremity of each piece is added a strap which is received in buckles placed on the sides of the board that constitutes the foundation of the apparatus. The half circles are movable. The foundation is covered with a linen cushion thick enough to raise the knee and lessen the strain upon the popliteal region. The limb is introduced between the poles, the fracture resting in the centre of the apparatus. After the rods and triangles are properly adjusted, the iron wire stem of the half circle is inserted in the central canal of the screw, and after securing the half circles by aid of straps, the union of the fragments is effected by tightening the screws. The second apparatus invented by Fontan is better known and more simple; its action, however, is less efficacious. It is a modification of Boyer's apparatus. In this second contrivance two circular bandages are placed above and below the patella. These are introduced in the half circles with which the foundation is furnished, and approximate the transverse bandages to the limb by means of lateral girths. In spite of all the care given in applying these forms of apparatus, they produced only fibrous union, and Bonnet recommended that whatever apparatus was used the heel should not be elevated above twenty to twenty-six inches, thus to avoid producing a harmful tension in the muscles of the posterior region of the limb.

Malgaigne's[36] hook apparatus was invented to effect the union of the fragments to the necessary degree, to result in the formation of osseous union. Its employment was advocated when the separation exceeded two inches, because then a fibrous union was almost inevitable if the ordinary bandage was used. This instrument has its support on the bone itself without the assistance of bandages or splints. It consists of three inch large steel plates so arranged as to slide one upon the other, and separated or brought together by means of a horizontal screw parallel with the plates. This screw engages itself in a hollow in the centre of the two riveted bolts on each of the plates and is turned by means of a key. The free extremity of each plate is bifurcated, ending in two very pointed curved hooks resembling those of a double forceps. The two hooks of the inferior plate are separated by one inch only, and are implanted on the summit of the patella in such a way as to lodge their points in the bone. Those of the superior plate are separated twice

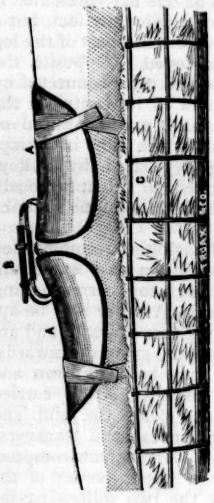


Fig. 27.—U. Trélat's apparatus.

Fig. 28.—Valette's apparatus.

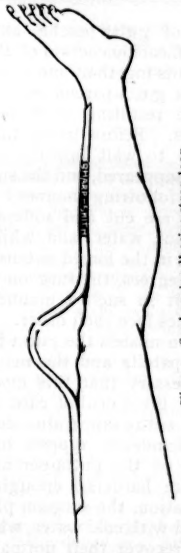


Fig. 29.—Sanborn's adhesive strap loop.

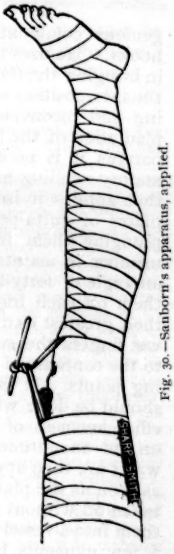


Fig. 30.—Sanborn's apparatus, applied.

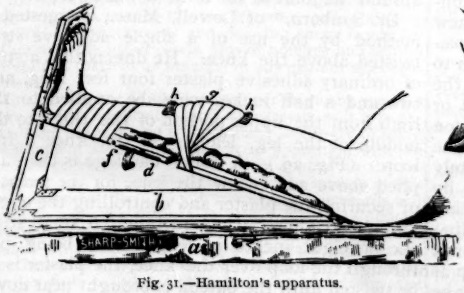


Fig. 31.—Hamilton's apparatus.

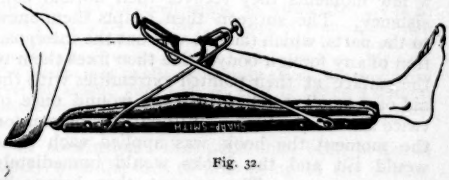


Fig. 32.

as much. The inside hook is longer, to accommodate itself to the obliquity of that part of the bone. To avoid the evil effects which were sometimes shown to be produced by Malgaigne's hooks, Rigaud, of Strasburg, proposed to replace the hooks with two metallic stems, which are to be introduced not only in the fibrous tissue, but in the patella itself. He used two screws which he implanted in the fragments and afterwards brought together by the aid of girths and a metallic arch.

Bonnet[87] (1851), of Lyons, adopted the use of the screws implanted in the patella with the precaution not to let them penetrate further than 4 to 5 millimeters. Two screws surmounted each fragment with a quadrangular frame of 3 millimeters in height, and were implanted in the intermediary parts of the fragments to within one millimeter of the fractured borders. Meanwhile, as an assistant approximates the fragments as much as possible, the surgeon fixes them in a state of coaptation by encircling them with bandages. He next presses them together with two little steel branches united by two screws. The application of this procedure, more theoretical than practical, was not effected without difficulty, and inconvenience.

A. Cooper's[88] procedure (of San Francisco), went very much further, and he proposed to unite the fragments by metallic sutures. A longitudinal incision sufficiently long to uncover the fragments having been made over the patella, these were pierced obliquely with a drill and the surgeon passed through these perforations silver sutures whose extremities were to be twisted until the fractured surfaces were brought into immediate contact.

In all the recent interesting papers upon the feasibility of wiring the patella, the writer has failed to find credit given to this American surgeon who was evidently its originator.

Trélat's[89] (1862) apparatus consists of a very in-

genious combination of gutta-percha and the hooks. He uses the efficacious action of the last in bringing the fragments together, and evades by the interposition of the gutta-percha the wounding and inconvenience resulting from the implantation of the hooks. Before using this apparatus it is necessary to wait until the inflammatory swelling has disappeared, and the surgeon then applies it in the following manner: Two plates of gutta-percha are cut and softened by plunging them into hot water, and while the member is maintained in the forced extension at an angle of forty-five degrees, the surgeon places them on each fragment in such a manner that their greatest extremities face each other. With wet fingers the surgeon models the gutta-percha to the contours of the patella and the neighboring points. It is necessary that this modeling should be done with a great deal of care, as the efficaciousness of the entire apparatus depends on its exactitude. Bandages dipped in cold water are then applied on the gutta-percha, and as soon as the plates are hardened enough to be taken off without alteration, the surgeon plunges them into a vessel filled with cold water, where in a few moments they recover their normal consistency. The surgeon then adapts them anew to the parts, which they fit without the interposition of any foreign body. He then fixes them to the surface at their pointed extremities with the aid of a small starched bandage wound once or twice around the limb. Without this precaution the moment the hook was applied each plate would tilt and the hooks would immediately cease to operate. The surgeon then brings by aid of the fingers each plate toward the other and implants strongly in each the corresponding half of the hook. And he need have no fear of piercing the gutta-percha and arriving as deep as the skin, for the gummy substance can only be penetrated with difficulty and the point rarely attain half its thickness. There remains nothing more but to screw together the plates and fragments to the degree desired. The surgeon next places the limb in a gutter of which the inferior extremity is elevated to thirty-five or forty degrees. At the end of several days the soft parts yield, and he must then take the plates off the limb and re-adjust the entire apparatus. After a month this splint has afforded all the results that can be expected and the hooks are to be taken off. But Trélat advises leaving the limb during several days afterwards in the extension position. He claims that this apparatus causes no suffering, procures a uniform pressure over a large surface, is not liable to accident, and allows the examination of the state of the fracture through the spaces between the plates.

Valette's apparatus (of Lyons), is composed of an iron gutter well padded, supplied with four straps and disposed in such a manner as to receive the entire limb. The one here presented is furnished with a sole to support the foot, but a gutter which would embrace but a part of the leg and thigh could be employed. Opposite the articulation two blades of iron arise connected by an arch which is perforated in its centre for the passage of forks. This arch can be raised or lowered by being placed in the slots in the uprights—the forks being regulated by a key. This apparatus is claimed to advantageously remedy the defects which Malgaigne's hooks present.

Prof. Gross,[40] of Philadelphia, recommended the employment of a padded tin case extending from the middle of the thigh to a corresponding point in the calf of the leg. A roller is to be applied upon the leg from the toes upward, and another upon the thigh from the groin downwards, the displaced fragments to be brought down and confined by numerous adhesive straps carried around the bone above and below the joint, and connected afterwards by vertical and transverse pieces. A long, thick and very narrow compress should extend around the upper border of the patella and confined by the two rollers, passed around the joint in the form of the figure 8.

Dr. Sanborn,[41] of Lowell, Mass., suggested a method by the use of a single adhesive strip twisted above the knee. He directs that a strip of ordinary adhesive plaster four feet long, and two and a half inches wide, be applied to the limb from the upper portion of the thigh to the middle of the leg, leaving at the knee a free loop. (Fig. 29.) A roller bandage is then applied above and below the knee for the purpose of securing the plaster and controlling the circulation and muscular contraction. A small stick six or eight inches in length then being put through the loop over the knee, the plaster is to be twisted until the patella is brought near down to its proper situation. Before applying the twist, a hard compress is to be placed above the patella in such a manner as to bring the force to bear directly upon the bone.

Prof. Frank A. Hamilton contrived a dressing consisting of an inclined plane of sufficient length to support the thigh and leg, and about six inches wider than the limb at the knee. (Fig. 31.) This plane rises from a horizontal floor of the same length.

Wales[42] draws particular attention to the merits of the forms of apparatus devised by two American surgeons, Lansdale and Hartshorne. Of the former (Fig. 32) he terms a very ingenious and efficient splint—holding the fragments in exact apposition and not constricting the limb. "It is constructed with a posterior padded splint upon which the limb is secured with a roller bandage." "From a point a short distance above the knee an iron loop, or arc, spans the limb obliquely, and when in position its top is below the patella; a simi-

lar arc is fastened to the splint at a corresponding point below the knee, and its top, when in position, is above the knee. Each of these arcs bear a screw at its centre armed with a semi-lunar pad. In the application of this apparatus after the limb is secured to the splint, it is simply necessary to bring the upper fragment down, and with the upper screw clamp the pad against it; in like manner clamp the inferior fragment with the lower pad.

Dr. Edward Hartshorne first employed his method in the Pennsylvania Hospital in 1862, and it consists of a simple application of the Spanish windlass.

The splint, which should be carefully padded—and sufficiently broad—is furnished on its sides, at proper distances above and below the knee, with notches or projecting cleats, pins or hooks which are required to hold the bandage. This bandage may be the common roller or adhesive strips, or even a band or ring of elastic webbing; but inelastic webbing, or linen, or cotton drilling from one and a half to two inches wide in the central portion and narrower at its ends, answers better, especially if the surfaces which we apply to the integument above and below the fragments are thinly spread with old adhesive plaster. The lower fragment is fixed in the usual way, and retained in position by simply applying one of the bandages by its wider central portion in front of the knee-joint directly to the lower margin of this fragment, then passing the two narrower ends obliquely upwards and backwards and drawing them firmly together over the upper cleats, pins or notches, and behind the splints, there to be fastened in any manner most convenient.

The bandage or band for the upper fragment requires more careful application and adjustment, as it is to exert all the pressure and traction force necessary to bring the fragment down, and retain it in apposition with the fixed lower fragment. Having been applied to the integument just above and slightly over the margin of this upper fragment, it is then drawn firmly downwards and forwards over the notches or cleats in such an oblique direction as may be found the best for efficient traction in each particular case. The two ends are firmly fastened together, and a small stick (or, what is better, the little wooden fork called a clothes-pin), passed between the band and the splint, is turned or twisted on its long axis in such a way as to draw upon the bandage to any proper extent. This arrangement allows the whole knee, especially the injured parts and the compressing bandages, to remain uncovered, at the same time that it gives entire control of the joint and of the separated fragments, as well as of the dressing itself. Compresses of lint or other material may be employed, but they are not often needed, particularly when adhesive plaster is spread upon the central portion of the bandage. Tilting of the fragments may be prevented by a transverse bandage, or by a narrow, well-padded transverse splint pressing upon the line of fracture. The ease and certainty with which the traction may be lessened or increased by the slightest turn of the twisting-stick or pin, at the same time that this pin may be fastened beyond the reach or control of the patient, renders this contrivance remarkably effective; while the simplicity of materials and arrangement bring it readily within the reach of every one. The same care in all essentials, and especially in adapting the splint and bandage, as to length and width of the former, and the distance apart of the cleats or notches, and the width and obliquity of the latter, must be observed in the use of this mode of dressing, as in other more complex or different arrangements.

From Erichsen[15] whose remarks upon the treatment of this fracture twenty years ago, may be taken as an index of the professional opinion existing at that time, is extracted the following:

There is rather severe inflammatory action in the knee with great synovial effusion. This requires to be reduced by rest, and the application of evaporating lotions, before any other treatment can be adopted. When this has been effected, means must be taken for the reunion of the fragments. With this view the principal point to be attended to is to keep them in sufficiently close apposition for firm ligamentous union to take place. With this view the upper fragment, which is movable, and has been retracted by the extension muscles of the thigh, must be drawn down so as to be approximated to the lower one which is fixed by the ligamentous patella. This approximation of the fragments may be effected either by position and relaxation of the muscles or by mechanical contrivance. Simple position usually suffices for this purpose and must be attended to whatever mechanical appliances are used. By placing the patient in a semi-recumbent position, and elevating the leg considerably so as to relax the muscles of the thigh completely, the upper fragment may be brought down to the lower one, and if necessary may be retained there after any local inflammation that results from the accident has been subdued—by moulding a gutta percha cap accurately to and fixing it firmly upon the knee, or by the application of pads of lint and broad straps of plaster. These straps of plaster may be applied above and upon the upper fragment in a diagonal direction from above downwards. They should be of sufficient length to embrace the limb and the back splint, to which they are to be fixed, or a figure of 8 may be applied around the limb and splint together. This position must be maintained for at least six weeks: At the expiration of this time the patient may be allowed to walk about, wearing, however, an elastic knee cap, or what is better, a straight leather splint in the ham, so as to prevent the knee from being bent for at least three months.

In conclusion: this paper has been prepared solely with the idea of presenting to the profession a concise résumé of the more important forms of apparatus which have been invented for this fracture prior to the last twenty years, and as its details are familiar to every practitioner, no mention is made of the present practice of encasing the limb in plaster-of-Paris, although this must also be considered a mechanical procedure.

The writer in this paper, which is intended to be entirely historical, does not enter into the controversy at present existing between advocates of operative and mechanical treatment, although

[1] Richter, Berlin, 1828. (Also Abulcasis, De Chirurgia, traduction latine par Channing, Oxonii 1778.)
[2] Ars. Chirurg. Venetiis 1546, cap. xxxix, fol. 154.
[3] Manuale operat. der Chir., Amsterdam, 1648, part iv, chap. 27, p. 325, plate 15, Fig. 26.
[4] Nouveau traité des instrumens de Chirurgie le plus utiles, T. II, p. 301, Paris, 1723.
[5] Chir. Lorbeerkranz, Halberst, 1685, Chap. 21, p. 111.
[6] De patella ejusque laesionibus et curatione, Franeq, 1697, and also in Haller's Disput. Anatom., Vol. VI, p. 209, Göttingen, 1751.
[7] La manière de guérer par le moyen des bandages les fractures et les luxations, Paris, 1712, p. 168.
[8] Grundlicher Bericht von Bandagen, Leipzig, 1732, p. 232.
[9] Chirurgie Rostock u. Leipzig, 1754, p. 561.
[10] C. L. Schmalz, Seltene Chir. und Med. Vorfälle, Leipzig, 1784, p. 192.
[11] Recherches critiques sur la Chirurgie moderne, 1772.
[12] Neue Bemerk und Erfahrungen, Book II, p. 219. (Also Theden, Progrès ulterieurs de la chirurgie, trad. par Chayron, Paris, 1777.)
[13] Lehrbegriff, Book IV, p. 422. Leipzig, 1789.
[14] Abhandlung vom Knies cheibenbruch, Nebst Beschreibung einer neuen Maschine dazu. Steudal, 1789, p. 29.
[15] Journal de Medicine, Chir. et Pharm., Paris, 1789.
[16] Richter, Chir. Biblioth., Book XI, p. 513. Göttingen, 1772–1796.

this subject is now attracting widespread attention in the profession. It is, however, safe to assume, that so long as a surgical operation to secure union of the fragments is not unattended with danger, excepting under antiseptic precautions, the details of which render its employment impossible for ninety-five practitioners out of a hundred, especially those residing in the country, the *mechanical treatment* being devoid of danger, and productive of a fairly good result with but little comparative inconvenience, will interest and continue to be employed by far the greater majority of the profession.

125 State St., Chicago.

METHYL-VIOLET.

Read at the Missouri Valley Medical Association at Kansas City, Mo., December 20, 1890.

BY FLAVEL B. TIFFANY, M.D.,
OF KANSAS CITY, MO.

A few months ago Dr. J. Stilling, of Strasbourg gave to the world in the *Revue Generale d' Ophthalmologie* his experience in the use of methyl-violet in the treatment of various affections, more especially those of the eye. When the article first appeared, May, 1890, I took the liberty of translating it, and subsequently my translation was published in two numbers, (non-consecutive) of Dr. Lanphear's *Kansas City Medical Journal*. I commenced the use of methyl-violet from the day I first read Prof. Stilling's article, for at that time I had on hand a case of suppurative iritis which had resisted all treatment, continuing step by step through the several stages of inflammation until panophthalmitis seemed inevitable.

The patient was an old man, 72 years of age, rather feeble physique, upon whom I had made extraction of a nuclear cataract some eight weeks previous to the attack of iritis. He had made a good recovery from the operation and with fair results, viz., with plus 11 D. $\frac{20}{40}$. Could read No. 2 with + 14 D. There was a slight amount of cortical substance remaining. The iritis did not ensue for a month after he had gone from the hospital, when it appeared quite suddenly one day as he was sitting in the harvest field watching the harvesters at work. He says that as he crossed the lot from one shade tree to another, in the full blaze of the bright August sun, he felt a sharp pain dart through the eyes, and from that time he was not fully free from pain, which gradually increased with intolerance of light and diminution of vision. It was several days after the attack before the patient returned to the city. When he presented himself I found an intense inflammation of the iris with plastic exudation in the front chambers.

Mydriatics and hot water were scrupulously used in connection with other antiphlogistics, but all to no purpose, the inflammation mounted higher and higher, and the exudation was more profuse and of a suppurative character; the iris becoming a deeper red until finally the whole chamber became blood red; the cornea began to grow steamy, there was intense ciliary injection; in fact the whole ball was aglow, and the lids swollen. There was much pain and total blindness. I despaired of any chance of saving the ball, much less any sight.

It was at this stage that I read Dr. Stilling's article on methyl-violet. I immediately had a preparation made, 1 to 1,000, which I had dropped into the eye, one or two drops at a time, thrice a day. This caused no irritation, but for a few hours there was little, if any, amelioration of the inflammation, although the eye felt better. At the end of the second day there was perceptible abatement of congestion, and the pain was nearly gone. The amount of medicine was increased. The conjunctival sac was filled at each application, morning, noon and night, and the inflammation gradually subsided.

The methyl-violet was continued for about three weeks, when the eyeball had become clear and free from inflammation. The shape and size of the ball had been perfectly conserved, the iris had assumed its natural color and brilliancy, although the pupil was nearly occluded and there was only perception of sight. The patient returned to his home in Kansas with the hope, through the means of a subsequent operation (to be made in few months) of regaining useful vision.

It has been about six or seven months since I commenced the use of methyl-violet in affection of the eye. I have used it a great many times and in many patients, and have kept a carefu

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record of several of the cases. It has been mostly used in phlyctænular conjunctivitis and granular conjunctivitis.

In cases of trachoma, when treatment cannot be continued by me on account of patients being obliged to return to their homes, out of the city, it has become my custom to prescribe a bottle of methyl-violet (1 to 1,000) to be used at home three times daily, and it has been invariably the case that these patients go on to recovery without any relapses, and that the medicine never acts as an irritant, but is always soothing and agreeable. I have used it with excellent effect in dacryocystitis by means of the lachrymal syringe. I have also used it in otitis media purulenta but not with as marked benefit as in affections of the eye, lachrymal apparatus, and nasal catarrh.

I have employed this agent in microscopy as a staining material, knowing its special and thorough action as a stain for different forms of microbes, and especially for the micrococci, and that it always means death to the bacillus when it comes in contact with him; striking, as it were, to the heart or nucleus of all cells; paralyzing all vital action at once; but it had not occurred to me to employ it as a therapeutic agent even in those diseases which are generally conceded to have their etiology in the microbes, until my attention was called to it by Prof. Stilling's able article to which I have referred.

Since I have been using this agent I have not had the opportunity of employing it in a single case of gonorrhœal ophthalmia. As yet, of course, the remedy has not been sufficiently used to establish it as so valuable a remedy as Dr. Stilling would claim for it.

Methyl-violet may be used as a local, topical and general systemic agent, in fluid or pomade, spray $\frac{1}{2}\frac{1}{0}$ to 1 per cent. It remains to be seen if it shall prove a valuable remedy in pulmonary affection, in pyæmia, etc. If it has a special predilection for the bacillus and cocci, we shall look for it as a boon in most diseases.

Within the last few days I have had occasion to use the methyl-violet in two cases, one of irido-cyclitis and the other choroido-clyclo-iritis, both of a most serious nature; that of irido-cyclitis occurred in a reverend gentleman, Mr. D., age 55, blue eyes. This patient consulted me December 9, complaining of quite a severe pain in the right eye, with dimness of vision. Examination revealed acute inflammation of the iris with intense deep red congestion of the sub-conjunctival vessels over the entire anterior scleral surface. The pupil was contracted and inactive, and would not respond in the least to mydriatics. A 1 per cent. solution of sulphate of atropia dropped into the eye five or six times a day made no impression whatever, not even controlling in the least photophobia or congestion; in fact all the symptoms grew steadily worse, and on the third day the cornea lost its transparency, became steamy, so that the iris was nearly hidden and the vision was gone; could not see to count fingers, and the fellow-eye had taken on symptoms of irritation, and its vision was considerably reduced. At this period, December 11, I ordered methyl-violet, $\frac{1}{1}\frac{1}{0}$ per cent., dropped in the eye every hour, in connection with the sulphate of atropia, and to my great delight the next day, December 12, I found the pupil dilated to more than twice its size of the day before, the congestion subsiding, the cornea clearer, and the vision sufficient to count fingers. The treatment was continued, and on the following day the patient was able to recognize a person across the room, pain was gone, redness less and pupil widely dilated. December 15, pupil wide open and vision $\frac{2}{0}\frac{0}{0}$, eye fast recovering.

The methyl-violet has quite a mydriatic effect and also controls the power of accommodation to a considerable extent; though it is claimed by some that it does not affect the power of accommodation. This fact I have verified many times, by using it alone without atropia. In the above case I feel confident that the methyl-violet, from its diffusibility and germicidic effect on the pyogenic microbe, cut short the disease and so saved the eye.

I do not believe that in this case the mydriatic effect of the atropia could have obtained without the methyl violet; besides, the methyl violet controlled the irritating effect of the atropia on the cornea, and checked the keratitis.

The other case, choroido-cycloiritis, occurred in a young man of 25 years, dark brown eyes, A. B. Patterson, from Juniata, Neb., a station agent on the Missouri Pacific railroad. The history, as gained from the patient, was as follows: While walking down the street October 13, with a penknife open in my hand, I met a friend, who in play knocked my hand with the knife so that the open blade pierced my right cheek, going into the eye, and then the doctor put a stitch in the eyeball and assured me that the sight would be all right (a German doctor). For about ten days the sight was very good, and then the eye began to pain and I could not bear the light, and the sight gradually diminished and the pain grew worse. An examination revealed a scar of the right cheek, lower lid and eyeball; that of the eyeball about 10 mm. long, about one-third of which extended into the cornea from the inner inferior region, near the attachment of the inferior rectus muscle. The cut of the cornea embraced the entire layers of the cornea, and evidently the blade went through the sclera and choroidal, though there was no evidence of its cutting the iris. The pupil was contracted, and the vision was not sufficient to count fingers, and photophobia intense. I ordered a 1 per cent. solution of atropia to be dropped into the eye every two hours, night and day. The second day the patient was sent to my

rooms; the mydriatic had not had the least effect. The ophthalmoscope revealed a grayish, light-colored body, with small, pale blood-vessels mounting up over it, projecting from the region of the ciliary body, and the sclera immediately exterior was swollen or bulged. There was evidently detached retina, with exudation beneath the retina. At this date I commenced the use of methyl violet, and had it dropped into the eye every hour, night and day. On the following day there was some dilation of the pupil, and less pain and soreness. December 16 I injected a 10 per cent. solution, 10 m., in the eye through the sclera, by means of the hypodermic syringe. The soreness has subsided and the pupil is more open, although the exudations are much the same.

Dr. Stilling speaks of injecting the vitreous of a rabbit without harm to the eye. My experience so far has been that the good effect from this agent is especially to be realized in inflammation of the deeper structures of the eyeball, owing probably to the great diffusibility and penetrability of the aniline, traversing almost immediately the cornea and sclera to the chambers of the eyeball, and having for its predilection the bacillus and micrococci. In ulceration of the cornea I have used it with most excellent results in the form of pomade, 1 to 200. For marginal blepharitis, or tinea tarsi, the methyl violet pomade, ½ per cent., carefully worked into the roots of the lashes by means of a spatula, works a speedy cure. Prof. Stilling, from his bacteriological experiments, found that milk mixed with methyl violet would not sour, nor would butter become rancid; that urine even could remain in a thermostat at 32° C. for a week without putrefaction, or presenting any bacteria whatever. In fact, any substance containing a solution of methyl violet of even 1 to 32,000, is absolutely indemnified. This agent acts as an antiseptic, killing the pyogenic bacteria, and from its diffusibility and non-destructiveness to tissues, it is superior to the other known antiseptics, and especially to thermo-cautery, which is so efficient a germicide, but can only be used at limited points.

In conclusion I would say that it is most important that the drug (methyl violet) be chemically pure, and free from arsenic. The article I have used I obtained from H. W. Evans & Bro., proprietors of the Diamond Drug Store, 908 Main St., Kansas City, Mo. An analysis made by our City Chemist, Dr. R. R. Hunter, and also by Dr. Claud C. Hamilton, Demonstrator of Chemistry at University Med. Col., shows no trace of arsenic.

THE WOMAN'S COMMITTE OF THE WORLD'S CONGRESS AUXILIARY ON PHYSICIANS.—Dr. Sarah H. Stephenson, Ch'n; Drs. Julia H. Smith, Mary H. Thompson, Mary Mixer, Fannie Dickinson, Elizabeth Chapin, Sarah H. Brayton, Julia Low, W. P. MacCracken, Harriet Heyl Carey, Rachel Hickey, all of Chicago.

MEDICAL PROGRESS.

Therapeutics and Pharmacology.

THE CURABILITY OF CANCEROUS TUMORS BY INJECTIONS OF BICHLORIDE OF MERCURY.—According to the Paris correspondent of the *Medical Press and Circular* for September 17, 1890, PROFESSOR POUCEL, surgeon to the Marseilles Hospital, suggested, in 1884, that, in order to explain the production of cancer, it would be found at no distant date that the microbe of cancer would be discovered by the microscope. Since then efforts were made to prove the parasitic origin of the disease, and some pretended to have discovered the new microbe, but soon afterward the pathogenic value of the bacilli, and it was even said that the microörganism was not necessary to explain the clinical phenomena of cancer. Assuredly the transport of living cancerous cells by the veins, and above all by the lymphatics, would produce homologous tumors, wherever these cells could find favorable conditions for germination. This mechanism, although explaining the generalization of the tumor, does not clear up the cause. The bacilli of cancer, as in the case of tubercles, exact certain conditions which are transmissible in an hereditary sense, and which constitute the predisposition and the tendency. When these exist, the rapid growth of these microörganisms becomes possible, and through their contact the epithelium becomes inflamed, proliferous and deformed, characterizing cancer. It was with this idea that he undertook a series of researches at the hospital of Marseilles. He had shortly before obtained a prompt cure of a malign pustule of a very bad form by injections of corrosive sublimate around its base, and these injections proved to him, first, that the bichloride had no ill effect on the tissues; and secondly, that it was efficacious against microbes absorbed through the lymphatics. It appeared to him, then, that it was quite rational to apply this treatment to cancer, or at least to tumors of a cancerous aspect of which the microbe (if there be one) is transmitted by the same means. Seven patients have already been submitted to this treatment, of whom the details are here given. The first was a woman without any syphilitic antecedents, whom he had treated for a long time with iodide of potassium. In the month of February, 1890, she entered the hospital for an ulcerated cancer of the right breast, which commenced ten months previously. The tumor was hard, uneven, and occupied all the mammary glands. The nipple was retracted, and the ulceration occupied the under part, giving exit to a fetid and abundant discharge. The axillary glands were as yet untouched, the tumor was free, and the general condition of the patient good. On the same day of her entry six injections (the half of an ordinary subcutaneous syringe

each time) of a solution of bichloride of mercury (1 in 1,000), were made into the most indurated points. No salivation followed, but the breast became a little inflamed. A month subsequently the woman returned, when it was found that the tumor had diminished in volume, and another series of injections were made, which were renewed four days subsequently. The decrease of the tumor was much more marked, and the fetid discharge had ceased. Unfortunately, a few days afterward, the patient was carried off by an attack of angina pectoris, to which she had been for several years subject. Two other patients were treated without success, but both of whom were very advanced in age, one of them being 81. The fourth patient was a retired officer. M. Poucel was called to him for a large phlegmon in the groin. After incision, a hard ganglion, of the size of a nut, was discovered, and as the man had had some dozen of years previously an indurated chancre, he was ordered pills of protoiodide of mercury. The tumor increased, in spite of this, rapidly, and soon attained the size of a large goose-egg. The son of the patient, a navy surgeon, was called in in consultation, and the cancerous nature of the affection was fully recognized. The first treatment was replaced by injection of the sublimate solution, a series of six every two days. At the end of three weeks all trace of the tumor had disappeared, and no return had taken place up to the present. Curious to say, the son had noticed in his own groin two small ganglions, which had dated three years back. However, about a year ago they became much more enlarged and harder, in spite of every possible treatment. Struck with the result of injections in his father's case, he tried them on himself, and for that purpose injected four half-syringefuls daily. At the end of a week these glands disappeared. A sixth case was that of a man who said that he had something wrong with his rectum, as he had often remarked a fetid, bloody discharge from the anus. Examination revealed the existence of a malignant tumor. Four injections were made daily, and in twenty days the cancer had *vanished*. The seventh and last case was that of a woman, aged 58. She was very emaciated, and presented in the left breast a hardened, nodulated tumor, about the size of a large walnut. There was no retraction of the nipple nor any affection of the ganglions. Two injections were made, and renewed eight days subsequently. Three months afterward Dr. Poucel revisited the patient, when no trace of the tumor could be found. Four more patients are at present undergoing the treatment, and a notable progress is marked in each of them. In concluding, the author says that he does not pretend that the real treatment of cancer has been found, but what he can affirm is that certain tumors of a *cancerous appearance* are susceptible of being removed by the injections in question, and the chances, as may be conceived, are much greater when practiced at the commencement. He used the words *cancerous appearance* advisedly, as in some subjects tainted with hereditary syphilis tumors resembling cancer are observed. However, in these cases iodide of potassium is the specific, whereas it has no effect on the true cancer. Several of his patients were treated, as stated above, by that drug without result. Therefore, it may be regarded as almost certain that all the cases mentioned were real cancers.—*Pacific Med. Record.*

KOCH'S TREATMENT; GENERAL RESULTS.—In a supplement to the December number of the *Bristol Medico-Chirurgical Journal*, DRS. MARKHAM SKERRITT and BARCLAY BARON give an account of their observations of Koch's treatment during a recent visit to Berlin. They reached the German capital on Dec. 5, and stayed there until Dec. 13. They saw a very large number of cases presenting the results of treatment under the most varied conditions: at the Charité, under Leyden, Fräntzel, and Gerhardt; at the Lazarus Hospital, under Langenbuch; and in the clinics of von Bergmann, B. Fraenkel, Cornet, and Levy. They also had an opportunity of seeing Koch's original cases at a demonstration given to the Hufeland Society, by Prof. Paul Guttmann, at the Moabit Hospital. A full description of the method of procedure, and of the immediate effects of the injections in different forms of tuberculous disease, is given. The types of reaction are classified as follows: 1. Typical, marked reaction to small early dose, diminishing reaction to the same or even to increasing doses. 2. Increased reaction to the same or a diminished dose. 3. Prolonged or deferred reaction. 4. Effect of reaction on hectic; *a*, *favorable*, when there is a tendency to the substitution of the reaction type for the hectic type, and *b*, *negative*, when the hectic persists unaffected by reaction. 5. Fever originated by injection. These various types are illustrated by cases and charts, and the cause of the diversity of action of the remedy in different cases is discussed. With regard to the results of the treatment in tuberculous disease of bones and joints, Drs. Skerritt and Baron say that the surgeons informed them that they had never seen, under any treatment, any approach to the rapidity with which improvement took place under the injections. They themselves saw cases where sinuses in connection with the diseased bones and joints, which had long remained open in spite of all previous treatment, rapidly and completely closed. With regard to glands, it is pointed out that the usual local change is swelling and tenderness during reaction, followed by gradual diminution in size. Suppuration does not commonly occur. In the larynx the local reaction may produce increase of pain in swallowing, increase of cough and expectoration, a feeling of

dryness and constriction, greater hoarseness, perhaps aphonia, and sometimes local pain. Contrary to what the authors anticipated, they found that, as a rule, no serious obstruction to breathing was produced, and in many cases none at all. With regard to the lung, they state that little can be said as to improvement in physical signs; "in some cases *râles* and dulness are said to have diminished, and bronchial breathing to have been replaced by vesicular, but as yet time is too short to allow of decided evidence on this point." They add that Koch claims to have completely cured two phthisical patients, with one of whom they had the opportunity of speaking. They also saw a patient in whom, during three weeks' treatment, the disease markedly extended in both lungs, and a cavity formed; dyspnœa, absent before, made its appearance; bacilli, previously few in number, became numerous, and the sputum was increased in amount. One of the cases seen by them, in which there was most marked lung reaction, had been examined again and again without the detection of a single suspicious sign. They also saw many patients in whom the injection revealed in very varied parts previously unsuspected tubercle. In no case, therefore, even the least suspicious, should an injection be made without the most careful and thorough preliminary examination, and the greatest caution should be observed as to dosage. In tuberculosis of the lungs and larynx the initial dose should be one milligram, which is gradually increased, one or more "fever free" days being allowed between the injections. For purposes of diagnosis exact reliance cannot be placed upon the result of a single injection. Skerritt and Baron saw a case of established phthisis, with bacilli, in which no reaction occurred until the dose had reached one centigram, and they were informed that this was by no means a solitary instance. On the other hand, reaction occurred in patients who otherwise presented no evidence whatever of tuberculosis; as, for instance, in a girl with post-scarlatinal nephritis. They sum up as follows: "The evidence at present at our disposal warrants the conclusion that the beneficial effects of the remedy is undoubted in tuberculosis of the skin, bones, joints, glands, and throat. With regard to pulmonary phthisis, whilst there is good reason to hope that in suitable cases a most satisfactory result may be obtained from this treatment, sufficient time has not as yet elapsed to allow of the formation of any accurate estimate of its value." —*British Medical Journal.*

TREATMENT OF ERYSIPELAS.—An elaborate research, clinical and bacteriological, has recently been published by Professor Nussbaum's assistant, DR. JULIUS FESSLER, on the treatment of erysipelas by ichthyol, a plan which has been for some years extensively adopted in Munich. From laboratory experiments it was evident that, though ichthyol has only a slight effect in preventing the development of staphylococci, it has a very potent deterrent influence on the multiplication of streptococci, and it is well known that it is the latter kind of bacteria that are the cause of erysipelas. The method of treatment consists mainly of rubbing a strong ichthyol ointment energetically, and for ten minutes at a time, into the affected surface and its neighborhood; ichthyol in the form of pills may also be given internally. Where there is a wound it must be very carefully disinfected, and an antiseptic dressing applied. The results of this treatment as compared with ordinary methods are embodied in several instructive tables. From these it appears that while the mean duration of the cases treated by other methods from 1880 to 1888 was about twelve days, in no single year falling below nine days, the cases treated by ichthyol from 1886 to 1888 presented a mean duration of under seven days, while in the first half of 1889 it fell to 5.6 days.—*Lancet.*

Medicine.

KOCH'S REMEDY IN TUBERCULOSIS OF THE LARYNX.—PROF. H. KRAUSE contributes the following interesting report to the *Therapeutische Monatshefte* for December, 1890. He says it is apparent that a definite result cannot be affirmed, as at the time of writing only two and one-half weeks had elapsed since beginning treatment, but the observations are of special interest at this time because of the opportunity of observing the direct effect of the remedy upon tubercular mucous membranes, which can be better seen than the effect upon lupus, for there the process is in a measure concealed by the thick crusts which form on the surface. The effect in the larynx is not as "stormy" as has been reported by some surgeons. He says nothing of the general symptoms, fever, etc., though he has noted considerable variation from those usually described.

Unquestionably a specific reaction is produced in the larynx; characterized by diffuse redness and swelling, with at first increase and later complete loss of secretion; also punctiform and diffuse hæmorrhages, superficial and deep exfoliation. In ulcers the base was changed, and in favorable cases was covered by a dirty gray coat that was thrown off, leaving a clean granulating surface, that showed a marked tendency to heal. Absorption of infiltrated masses could be determined. The patients often experience a sense of constriction, and in cases presenting marked infiltration there is frequently some pain.

A cure cannot as yet be affirmed, owing to the short time that the remedy has been in use, but from its action we may look for favorable results in those cases in which the disease is not too far advanced. Especial care must be exercised in

the treatment of advanced cases, as a too rapid increase in the dose may cause very grave symptoms.

Krause mentions a case that had been under observation for eight weeks, in the last two and one-half of which the treatment had been with Koch's remedy. A decided change for the worse was noticed in this patient, which the writer is inclined to attribute to the fact that the limitations of the remedy have not been determined, and in consequence it has not been decided at what time surgical interference is necessary.

The writer describes the following case: A young woman, well nourished, presented herself at the policlinic. The right lung was involved, the mucous membrane of the larynx presented a diffuse swelling, so extensive as to interfere with deglutition. The epiglottis was three times its normal size. Lactic acid and curetting were employed, and the patient improved so that swallowing was easy and the cavity of the larynx could be seen, showing the gray ulerations left by the caustic. In this stage Koch's remedy was employed. Twenty-four hours after the injection the secretion disappeared, the infiltrated ligaments and epiglottis decreased. A few days later the swelling increased, but a gray coating was soon cast off, leaving a clean granulating surface. The later progress of the case with an increase in the dose, showed similar results, excepting that the action was more vigorous, and left deep ulcerating patches.

Another case was that of a young man who had in the posterior wall of the larynx a small tumor, that after 1 milligram of the remedy was thrown off completely, leaving a clean granulating surface that soon healed.

The writer contributes several similar cases, showing the more or less favorable action of the remedy.

NOCTURNAL ENURESIS TREATED BY POSTURE.—DR. VAN TRENTON, of La Hague, in a paper read before the Berlin Congress, offered the simplest explanation and treatment of nocturnal enuresis that has lately been presented. His theory is that in some children there is an insufficiency of the sphincter vesicæ, which permits the urine to come in contact with the upper urethra, and this in turn, by reflex action, causes the detrusor urinæ to act. He argues that it cannot be that this trouble is due to the impression of distension of the walls of the bladder, because not a few children wet the bed within a period, for example two hours, after going to bed that is too brief to have the bladder in a distended condition. His plan of treatment undertakes to prevent the urine from flowing into the urethra, by raising the foot of the bed. He has made fourteen cures by this method, with the two added precautions of having the child empty the bladder just before getting into bed, and of allowing no drink to be taken by the patient for some while before bedtime.—*Annals of Gynecology.*

Obstetrics and Diseases of Women.

LAPAROTOMY.—M. C. JACOBS (*Bulletins et Memoirs de la Société Obstétricale et Gynecologique de Paris, Séance du 11 Décembre, 1890*) reports a series of fifty laparotomies with only three deaths, or a mortality of but 6 per cent.

Five operations were for uterine fibromas, including two hysterectomies, with extra-peritoneal treatment of the pedicle, recovery; one hysterectomy, in which the pedicle was dropped with its elastic ligature; this was followed by inflammation necessitating two consecutive laparotomies, with ultimate recovery; one double castration, cure; and two ablations of pedunculated fibroids, attended with recovery. Three operations were performed for tuberculosis of the peritoneum, with three recoveries from the operation. The writer justly observes that only the lapse of considerable time would permit one to say that there was complete recovery. Twenty-one operations were performed for salpingitis, eighteen with castration and ablation of the diseased tubes. The writer reports excellent results in these cases. In unilateral purulent salpingitis the ablation of one tube and ovary was sufficient, while in the catarrhal and interstitial forms the removal of both tubes and ovaries is indicated. Two deaths are reported in this group, one from septic peritonitis the other from pulmonary congestion.

Dr. Jacobs reports five exploratory laparotomies, but only one of these can be classed strictly under this tentative procedure, the abdomen being opened for a phantom tumor; another case was one in which the abdomen was opened in consequence of a septic accident, following a previous laparotomy; in another case a purulent foyer was found in the upper portion of the cicatrix. Eight ovariotomies with eight recoveries are reported, two of them were for cysts of the broad ligament. Five hysterectomies were performed for painful prolapse and retroflexions. Sufficient time has not elapsed to permit a definite answer as to results.

THE INFLUENCE OF ARTIFICIAL RESPIRATION ON THE HEART OF THE NEWLY-BORN.—DR. W. E. FOREST read a paper in the Section in Pædiatrics, New York Academy of Medicine, Dec. 11, 1890, with this title, based upon three interesting cases. In the first, after prolonged labor, the child was apparently dead. No pulsation of the heart could be detected by the hand, but by the ear it was found to be beating sixty a minute. After artificial respiration for fifteen minutes the pulsations increased to 120, but rapidly decreased in number when the child was left for a few minutes to itself. This was repeated many times with a similar result. After an hour and forty-five minutes the heart continued to beat, but as

no effort at respiration had been made by the child, the case was abandoned. The second case lived, the result of artificial respiration being invariably to increase the cardiac pulsations. In the third case artificial respiration was continued an hour and forty minutes before the child could breathe.

The method employed is in some respects entirely new. The child is placed in a pail of hot water to maintain the vital heat. This the author believes is a point of great importance. The head is then grasped by the hand and thrown backward so as to throw the vertebræ of the neck forward. The hands are drawn up and pressed against the chest. This compresses the œsophagus between the larynx and vertebræ, and at the same time the mouth opens. The physician then blows strongly into the mouth of the child. The œsophagus thus compressed prevents the entrance of air into the stomach. The head is then thrown forward, and the arms brought down to the side so as to expel the air from the lungs.

The points of especial importance are the use of the hot bath to maintain the vital heat; the use of the ear to detect the cardiac pulsations which could not be felt by the hand; the necessity of long-continued effort if pulsations can be heard; and the peculiar method of compressing the œsophagus.

Dr. W. H. Thompson, strongly advocated the hot bath. The method of artificial respiration was ingenious, and certainly showed that the lungs had been inflated.

SEXTUPLE PREGNANCY.—VASALLI (*Rassegua di Scienze Med.*) reports the case of a woman who in the fourth month of pregnancy reached a size equal to that of term. She was taken with pains and in the course of six hours was delivered of six fœti. Their combined weight equalled 1,730 grams, the largest weighing 305 and the smallest 250 grams. Their length varied from 22 to 26 cm. The single placenta was large, adherent, and had to be removed piecemeal. It presented six distinct fœtal sacks.

Bacteriology.

MICROBE OF EPIDEMIC CEREBRO-SPINAL MENINGITIS.—At the present time very few opportunities occur of studying epidemic cerebro-spinal meningitis. DR. BONOME has had such an opportunity, and made careful investigations as regards the anatomy and etiology of this disease. The outbreak occurred near Padua. His conclusions, together with an account of his experiments, are published in Ziegler's *Beiträge zur pathologische Anatomie und zur allgemeine Pathologie*. Dr. Bonome was able to examine thoroughly the bodies of five patients who had died from the disease, and the meningeal exudation from a sixth. In addition, in several other cases the blood and catarrhal secretions from the throat and nasal cavities were submitted to investigation. He succeeded in isolating from the exudations of the cerebro-spinal meninges, and from hæmorrhagic collections in the lungs, a streptococcus, which did not, however, grow readily on artificial media, and when so cultivated, or after being preserved in a dry state, soon lost its pathogenic characters. In white mice and rabbits the microörganism produced the same effects as those brought about by injections of the pneumococcus or meningococcus, fibrinous inflammations being induced, whilst in guinea pigs and dogs the microorganism scarcely reacted at all to the pure cultures. This streptococcus found by Dr. Bonome differs from the pneumococcus and meningococcus again in the ball-shaped appearance of the colonies on agar-agar plate cultivations, in its inability to grow on blood serum, and in the difficulty which is experienced in carrying the cultures through five or six generations. Also it fails to produce true septicæmia in white mice; and when rabbits are inoculated, the micrococci obtained from the blood are arranged in chains surrounded by a capsule, and the same forms are obtained from the gelatinous transudation met with in mice, guinea pigs, and dogs which have been artificially infected with the disease. The streptococcus, again, is distinguished from the streptococcus of erysipelas by its action on animals and by its failure to grow on gelatine and blood-serum, and also by the appearance of the colonies on agar-agar plates. In contrast with other microörganisms which are morphological analogues many differences can be made out. Thus, it differs from the streptococcus pyogenes and from the septic streptococcus found in earth by Nicolaier and Guarnieri; also it can be clearly distinguished from the streptococcus found by Loeffler in cases of diphtheria, and from the organism found by Weichselbaum in some cases of pneumonia. After careful consideration of all the points in connection with this epidemic at Padua, and the results of his bacteriological examinations, Dr. Bonome claims that he has substantiated the existence of the microbe of epidemic cerebro-spinal meningitis.—*Lancet.*

PATHOGENESIS OF TETANUS.—FABER (*Berliner Klin. Wochenschr.*) has separated by filtration, from pure cultures of virulent tetanus bacilli, a substance that is wholly free from germs, and yet when it is injected into animals, either in the cellular tissue or blood, it produces the clinical picture of tetanus. There seems to be a certain latent period, before the production of the symptoms, that varies with the virulence of the culture from which the extract is prepared. When injected into the blood it produces general convulsions, when into the cellular tissue these are associated with local convulsions. No specific immunity could be determined as a result of the injections.

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SATURDAY, FEBRUARY 28, 1891.

SECTION MEETINGS OF THE ASSOCIATION.

The real success of the Association meeting depends mainly upon the work done in the Sections. The general addresses vary widely, and although they often present very excellent discussions and résumés of our present knowledge, still they are not presumed to reflect the best scientific work, but to deal in a general and popular way with medical interests generally. The officers of the Sections are, after all, more influential in directing medical progress. They should not leave the topics altogether to the chance of volunteers to prepare and read papers; nor after inviting and receiving a dozen or more papers on widely differing topics, and finding it impossible to group them in any natural order, should they proceed to serve them up on the time plan in the order of their reception. The officers of each Section should select one or more general topics that have a broad interest to the whole profession, then invite several leading men to discuss the different phases of the subject. After this voluntary papers may be admitted. In this way the listener could get some general idea of the views of the best authorities, in some of the different fields of medicine.

More important still is the method of presenting papers. Each reader should remember that his listener is a practical man, who comes for a practical purpose of enlarging his knowledge of science; also that his medical position or reputation is of little moment to the hearer. The hearer, like the Athenian of old, comes to hear something new; or to compare his knowledge with others. First of all the writer of a paper should be convinced that he has some new fact to communicate; some new view of the etiology, pathology or therapeutics of some disease; or some new effect of a medicine; or some fact that has not been mentioned before. Then state this fact in the briefest way possible. If it be relating to pneumonia, he reflects on the intelligence of his audience by giving the history and pathology of this disease, and the many views of different authors, when he merely wants to call attention to a new remedy and method of cure. If he has made a discovery in the pathology of diphtheria, the history and views of others of the pathology is an assumption that his audience are first-course students in medicine, and can not appreciate his views unless the entire history is given. If it is on a surgical subject, or any other branch of the practice, it is always in bad taste to go over in detail general principles as laid down in any text-book. It is also very suspicious for any writer to load down his topic with references to foreign authorities, which the average reader can not verify, or even to quote largely from home writers, and close up with a ponderous list of references. If he is writing a book or prize essay, it may not be noticeable, but for a paper to be read at the Association meeting, it should not be. All the listener wants are the writer's conclusions and the facts upon which they are based. He will listen cheerfully to a full elucidation of these, but turn away wearied when the writer falls back to describe well known facts.

A paper for the Association should only be exhaustive along some new unknown range of study, and even then the writer will be praised for giving his conclusions, and refer the listener to a printed copy when it appears in the Association Journal. THE JOURNAL, in not a few instances, has suffered from the space given to long papers, which were but a mere repetition of what could be found in every text-book. These papers were read before some Section, and their publication was inevitable. The writers were merely publishing their own weakness, and THE JOURNAL can not be made responsible. The elevation of the tone and character of THE JOURNAL will largely depend on the writers and readers of papers at the Association meetings. Editors may write well, and make selections of the best current literature, but if the best half of THE JOURNAL is

filled with heavy padded, pedantic and text-book papers, their efforts are sadly neutralized.

Is it not true that journalistic literature is unfortunately loaded down, in all sections of the country, with papers made up from text-books, that suggest nothing, or teach nothing, that has not been known before? THE JOURNAL has the same experience as others, but, unlike them, it can address its writers in advance. At the coming meeting at Washington over a hundred papers will be presented and read. Each writer will always represent himself more than the topic he discusses. If he has anything new to communicate, it will not be lost in faults of presentation, or of style of writing. If he has nothing new, all the elegant flow of words, and learned references to vast libraries can never give it life or vitality. Each writer should remember that he can not in any single paper of any reasonable length exhaust his topic, or even convey a complete general impression of the entire subject. This is very evident in the attempts of really expert men to give reports of the progress of science in any one department, which is always imperfect, and becomes more so every year, for the reason that the progress of medicine is so rapid and expansive that no one man can present any complete picture of even one department. Each writer should remember that his personal views and opinions are only valuable when they are sustained by real or assumed facts, which his audience would like to hear, so as to form an opinion for themselves.

The facts of medicine are like those of astronomy, always open to a marked personal equation which is a source of error that needs constant correction. A writer may be very positive in his conclusions, but a study and comparison by others of the same topic fail to sustain him; hence it is dangerous to urge the completeness and accuracy of any facts beyond all others. Each writer should never forget that the Association and its meeting represents the science of medicine in this country. Papers which have been praised in his local society come before a different audience in the Section meetings. Nothing can be greater injustice personally and to the Society than careless, confused egotistical papers.

THE JOURNAL particularly urges all writers who are to take part in the coming meeting to present their best work, in the best manner. It would also urge the officers of each Section to discriminate and arrange papers that are offered, and advise writers frankly as to the merits of their papers. Brevity and condensation are the practical needs of the medical public. While the general character of the papers read at the Association meetings have been steadily improving, the demand each year is for broader more thorough scientific discussions. The theories and conclusions of last year can not always be trusted to-day. The progress of medical science is rapid and intense, and the aspect of many supposed facts have changed materially. A repetition of last year's papers, unless fortified by some new evidence and new views, are open to grave criticisms. Extraordinary results from the application of remedies or methods of treatment bring the writer into a centre of suspicious criticism. All such papers need to be grouped with great care and exactness.

Finally, THE JOURNAL, upon whom much of the criticism falls for bringing to light the varied papers which are read before the Association, would remind all the coming writers, that the more accurately and scientifically they present their papers, the greater the success of the meeting. An *ideal* journal can only be made by embodying the high scientific ideals of the writers in its pages.

The most practical fields of work are observing, grouping and comparing real and supposed facts, not to discover their full meaning, but their possible practical relation. This is the spirit and purpose of the Association, and the responsibility and scientific success of the coming meeting will turn on the recognition of this fact.

The members of the Association look to the officers of the Sections and the writers to make the coming meeting superior to all others. This will be merely along the line of all science in evolutionary growth.

DIET IN BRIGHT'S DISEASE.

LÉPINE, in a paper before the International Medical Congress, on "The Treatment of Bright's Disease," maintained that the chief indication was the prevention of uræmia. With this end in view he laid special stress upon the importance of lessening nitrogenous food to a point where tissue waste would be just balanced, which he placed at about 80 grams of albumen daily for

the average adult. In practice he thinks the best results will be achieved by a milk diet, to which a certain proportion of carbo-hydrates are added, as the nitrogenized constituents are present in too great relative proportion in milk.

If we adopt the view that "uræmia" is dependent upon an excess of urea in the blood (WILLIS), or of carbonate of ammonia (FRERICHS), or of creatin and creatinine (OPPLER, PERLS and ZALESKY), it is at once apparent that a lessening of the proteids of the diet would decrease the amount of these nitrogen-containing substances, in the blood.

Unfortunately, the process is not quite as simple as these views would lead us to think. In Bright's disease there are profound changes in the blood, and one writer, REES, asserts that the symptoms of uræmia are caused by tenuity of the blood and increased vascular pressure. If this is true, it is possible that a marked lessening in the proteids of the diet might aggravate the very condition it was intended to relieve.

Unquestionably a proper regulation of the diet, so as to include only a due proportion of nitrogenous food, is of the utmost importance, particularly in the early stage of Bright's disease, and nephritis generally. In this stage the kidney should be placed physiologically at rest as far as possible. Whether in the later stages, when uræmic symptoms may be looked for, and marked changes in the blood and vascular pressure are present, much is to be hoped for from a mere lessening of nitrogenous food, is still a matter of grave doubt, and in the light of the very uncertain pathology of uræmia, perhaps hardly justifiable.

DIGITAL SYPHILIS OF MEDICAL PRACTITIONERS.

A correspondent in the *Southern Medical Record*, January, quotes DR. FESSENDEN N. OTIS, of New York, in regard to the occurrence of an intractable sore on the finger of a surgeon or accoucheur due to syphilis. Whenever a sluggish lesion in this situation presents itself, he always suspects specific infection, and narrates a case illustrative of some of the difficulties that surround a conclusive diagnosis. About two years ago, he chanced to be at Lakewood, where he saw a gentleman going about with his fingers wrapped up in a handkerchief. The latter gentleman was a surgeon of large practice in a Western city, and having been introduced to DR. OTIS, showed him a finger that had been troublesome for some months, dating back to the time of a certain surgical operation, in the course of which his finger had been cut with the knife. The operation was an ordinary hare-lip operation, on a young German girl, for removal of a lesion that was regarded as cancer of the lip. A sore soon after made its appearance about the nail, and became troublesome. Recognizing the possibility of causal relations between this sore and the lip lesion of the German girl, the finger was laid open down to the bone and scraped, dressed antiseptically and put in a plaster bandage. He had at the time a suspicious eruption, and some of the glands were enlarged, but not the epitrochlear. He was put on mixed treatment, and as he was quite unable to do any professional work, was advised to go abroad. He went to England, and while there consulted SIR HENRY THOMPSON. The latter examined the patient, and his finger and eruption, carefully, and denied the existence of syphilis in the case; he advised him to throw away his medicines and go home. He returned to this country and related the circumstances of his visit to the London surgeon to DR. OTIS, who strongly recommended him to hunt up the German girl upon whom he had operated. He did so, and subsequently reported that she had developed unmistakable symptoms of secondary syphilis.

At the Hunterian Society, recently, MR. C. J. SYMONDS stated that he had known of as many as five medical men with genuine Hunterian chancre of the finger, acquired in obstetric practice. He has known amputation of the affected finger to be performed where the joint was much endangered; but he had not yet found this measure needful. If the sore be thoroughly scraped and cauterized with acid nitrate of mercury, the bone and the joint will most likely be saved.

HYDROCYANIC ACID ANTIDOTAL TO TUBERCULOSIS.

SCHRÖTTER, of the University of Vienna, has announced to his colleagues of the Society of Physicians that he has made a partial investigation regarding the alleged discovery of the immunity of a certain class of artisans in Austria against tuberculosis, and he has come to the conclusion that that disease is very rare in those

workshops where the cyan-metals, as they are called, cyan-gold and cyan-silver, are employed. He holds that the hydrocyanic acid is the efficient element in these chemicals, and that he has data sufficient to warrant the systematic trial of that agent as a bactericide in tuberculosis. Incidentally, it may be remarked that he has found that not only is it a very rare occurrence, among the workmen of the class referred to, for pulmonary disease to attack one of them, but also it is often remarked that those who come from other places and other works with incipient troubles have been benefited, and some of them have been entirely cured, at least so far as the testimony of the workmen themselves went.

There are several large factories in Southern Austria where fine metallic wares are made, and in the finishing of them the cyan-metals dissolved in the cyanide of potassium are required to be used in order to galvanize them in silver or gold, and the atmosphere of these factories is more or less heavily charged with the complex vapors given off from the vats and chambers; the assumption being made, however, that the potential chemical is the acid, and not the precious metals that are combined with it.

EDITORIAL NOTES.

THE MEDICAL SOCIETY OF THE STATE OF TENNESSEE.—The annual meeting of this State organization will convene at Nashville on April 14, and will be in session for three days. The officers of the Society have made ample provisions for a most successful meeting. They advise us that an unusually full list of valuable papers is promised by men who will not fail to sustain their well established reputations both as writers and speakers. The home of the President of our Association will not only honor its State by this meeting of its representative men, but we look to Tennessee for a strong reinforcement to the ranks of the American Medical Association at its next annual meeting.

CENTRAL-ZEITUNG FÜR DAS KOCH'SCHE HEILVERFAHREN is the title of a new journal devoted especially to progress in the treatment of tuberculosis and other infectious diseases. It appears on the first and sixteenth of each month. The current issue, No. 3, contains the article of Prof. Virchow on the changes produced in internal organs by injections of Koch's lymph, a continued article from the pen of Dr. Kammerer on the experience with the same remedy in Vienna, also von Gossler's regulations to prevent the spread of tuberculosis. In addition there is a *résumé* of other publications. It cannot be said of modern science, especially the German, that its light is under a bushel. The establishment of a new journal to exploit a discovery only a few weeks old, argues most praiseworthy activity.

CORRECTION.—The annual meeting of the Medical Society of the Missouri Valley will convene at Omaha, Neb., March 19 instead of March 17, as previously announced in THE JOURNAL.

A HEALTHFUL SUBTROPICAL CLIMATE.—The English journals evince a feeling of exultation in speaking of the comparatively salubrious sections of the British sphere of influence, in east Central Africa, some parts of which lie directly under the equator. In contrast with some more southerly points occupied by the Germans, this English territory, even on the coast line, has a climate that is both more endurable to white colonists and more healthful. Even in the hot season they claim that it is cooler than it is five degrees farther south.

HARPER HOSPITAL, DETROIT.—Dr. Heneage Gibbes, Professor of Pathology at the University of Michigan, has been appointed consulting pathologist to the Harper Hospital, Detroit. This appointment will enable Dr. Gibbes to coöperate freely with his colleague, Dr. Shurly, in their joint researches concerning the nature and treatment of pulmonary tuberculosis, which are about to be carried out on a larger scale than heretofore.

ACCIDENT TO VON BERGMANN.—An injury sustained by Professor von Bergmann in the course of professional duty, has compelled him to take a temporary leave of absence from all official work. The wound involved one of the fingers of the right hand, and at first was not considered to be serious, but it has rendered repeated slight operations necessary. The professor has been and is still confined to his room, and will probably have to carry his hand in a sling for some time to come.

PATIENTS undergoing the "lymph" treatment at Chicago Presbyterian Hospital show no very decided improvement up to the present time.

MEDICAL ITEMS.

ACCIDENT TO PROF. BERGMANN.—It is said that Prof. Bergmann has had the second finger of his right hand amputated on account of threatened blood poisoning from an operation on a lupus patient who was undergoing the Koch treatment.

THE MINNESOTA PRACTICE ACT.—The operation of the Minnesota Medical Practice Act has reduced the ratio of physicians, from one to six hundred and fifty, to one in twelve hundred and fifty. During the past three years two hundred and five candidates presented themselves for examination, seventy-seven of whom were rejected.

THE TRICKS OF NEW ORLEANS MILKMEN.—It is said to be a common practice in New Orleans for milkmen to renew the creamy appearance of skimmed and watered milk by the addition of condensed milk from cans. If such is the case its importance at once demands the attention of the health authorities, or else all New Orleans infants should be denied the preparation.

UNIQUE IRISH DECISION.—The *Boston Medical and Surgical Journal* repeats from foreign sources as a true story, a remarkable verdict rendered two or three weeks ago in Ireland, growing out of the railroad calamity that took place near Armagh. The plaintiff, a woman who had been injured, sued first for damages to herself—she had been bruised and shaken and caused to come to premature childbirth, with much risk, anxiety and suffering—and the jury gave her £800. Next she sued on behalf of her baby, which has been from the time of premature delivery puny and deformed, and not expected long to survive. The jury awarded the infant nothing, for the reasons that the company never sold a fare to include that baby, and in fact the company had no knowledge that the baby was on the train. Therefore according to law no responsibility attached to the company in respect of that surreptitious passenger.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION, was organized on the 22d of January, 1891, at the Academy of Medicine, No. 17 West 43d St., New York, by the adoption of a Constitution and By-Laws, and the election of the following officers: President, G. Betton Massey, M.D., Philadelphia; Vice-Presidents, William James Morton, M.D., and Augustin H. Goelet, M.D., New York; Secretary, William H. Walling, M.D., Philadelphia; Treasurer, Geo. H. Rohé, M.D., Baltimore.

Executive Council.—Horatio R. Bigelow, M.D., Philadelphia; Franklin H. Martin, M.D., Chicago; W. F. Hutchinson, M.D., Providence, R. I.; Frederic Peterson, M.D., New York; and Chauncey D. Palmer, M.D., Cincinnati, O.

The object of the Association, as stated in Article Second of the Constitution is, "The cultivation and promotion of knowledge in whatever relates to the application of electricity in medicine and surgery." The Association starts with a strong and vigorous membership, and has every prospect of a most useful and successful career. The next meeting will be held in Philadelphia, in September, of this year. Wm. H. Walling, M.D., Secretary, 2005 Arch St., Philadelphia, Pa.

CHLORAL HYDRATE IN EPILEPTIFORM CONVULSIONS.—An Irish physician, Dr. W. Ashley Cummins, reports a case of almost continuous epileptiform convulsions opposing alike the influence of nitrite of amyl, hyoscyamine, potassium bromide, chloroform, nitro-glycerine and bichloride of soda, but which finally succumbed to enemata of chloral hydrate, gr. xxx, every three hours.

DR. N. H. KIMBALL, a physician well known in Southern Michigan, died at his home at Adrian, Mich., recently.

THE ART OF CATCHING COLD.—The *Provincial Medical Journal* has an article in a late issue entitled: "The Art of Catching Cold; by a Professional Failure." Truly such a heading should not fail of attracting a generous number of readers.

THE KOCH TREATMENT.—General medical literature (periodical) still teems with papers, lectures, and reports of the Koch treatment; although it is believed that the first enthusiasm is subsiding to a more conservative estimation of the cases receiving attention in the home hospitals. The true merits and proper application of Prof. Koch's discovery, are yet to be determined.

THE TIME TO RECORD DAILY TEMPERATURE.—Prof. Da Costa considers that in important cases the daily temperature should be recorded close to the hours of 7 A.M. and 7 P.M. Where only one observation can be taken, it should come near the evening hour.

TOPICS OF THE WEEK.

THE MORPHOLOGY, CULTIVATION AND TOXIC PRODUCTS OF THE TUBERCLE BACILLUS.

At the meeting of the Pathological Society of London, held February 3, 1891, Dr. Edgar M. Crookshank presented a paper of remarkable value upon the above subjects. He gave a series of demonstrations of the morphological varieties of the tubercle bacilli, comparing those in the tuberculosis of various animals, such as the horse, pig and cat; and of birds, such as the fowl, guinea fowl, pheasant and ostrich. It is found that in these, minute morphological differences can be discerned, showing that, within certain limits, the morphology of the bacillus varies with its environments, and that certain modifications are dependent upon methods of culture. He enters quite fully into a description of his methods, and then deals at length with the toxic products, giving in particular the results of his own investigations.

The London *Lancet*, commenting upon the paper of Dr. Crookshank, gives a brief outline of the conclusions to be derived therefrom, and from the discussions which followed its presentation, in the following words:

It is evident that, although chemists, bacteriologists, and pathologists are working to a common end, each emphasizes somewhat different points. On the one hand, we have the bacteriologists taking up rather the botanical aspect, cultivating the tubercle bacillus in different media, and retarding or increasing the rate of growth and development by the addition of certain substances. They, in fact, study the organism as a saprophyte, and are contributing most remarkable facts to our knowledge of the history of the organism outside the body. When, however, on the other hand, the chemist comes to consider the action of the organism as a parasite, the facts obtained by the botanist are for the moment of comparatively little value, as Dr. Sidney Martin indicated. All the knowledge that has yet been obtained in connection with the action of the organism on the animal economy points to the fact that they do not act any in way except through their poisonous products. These products are derived entirely from the breaking down of albuminoid substances. It may be, of course, that some of them are only one or two removes from the higher albumens; whilst others may be looked upon as the later products of the decomposition of this same material by special organisms. It is evident therefore that the specific toxic functions of a parasitic organism can only be brought into full play when it is placed in a medium that contains sufficient albuminoid material on which the organism may act to produce the specific material. Of course, it may be objected to Dr. Martin's statement that alkali albumen (to which he would add the special salts required) is probably one of the best nutrient media for the growth of the tubercle bacillus in all its strength, and that alkali albumen does not occur as such in the body, just as fibrin does not; but to this may be answered that, although fibrin does not occur as such, the constant elements of which it is composed are undoubtedly present, and that the organism has therefore only a little more or a little less work to do to obtain the same results.

To the physician, however, who has to deal with disease in both its etiological and pathological aspects, something more than either the chemist or the bacteriologist tells him is necessary. He has not only to study the conditions under which the organism is developed outside the body, the method of invasion of the tissues by the tubercle bacillus, the local changes to which it gives rise, and the general or constitutional symptoms that result, but he has also, if possible, to trace the phylogenetic relations of the organism to see how its specific activity may be modified, and to apply the results of the experience already gained to the improvements of methods of treatment, whether by inoculation or by other means; in fact, nothing must escape his notice, and no means of increasing his knowledge of any phase of the life of the organisms that produce disease can be neglected or cast aside as unimportant. The tubercle bacillus within the next year or two will receive more attention than any other of the microörganisms. It will be studied by competent and incompetent observers; the most contradictory results will be obtained; we shall be told that the tubercle bacillus forms enzymes, albumoses, tox-albumens and ptomaines. It will be argued that its growth takes place most luxuriantly under certain conditions, and that certain other conditions are absolutely inconsistent with any growth at all. Let all such very positive statements be taken with reserve, for it is becoming evident that if care is taken to make a transition by sufficiently easy stages, tubercle bacilli, like many other organisms, may be cultivated under very different conditions as regards soil, temperature, etc., and that consequently the resulting products are equally varied. Thanks to the younger workers in physiological chemistry in this country, a new school is gradually being formed, and it is evident that much more accurate and valuable data than we have hitherto possessed are being gradually accumulated. We may, in fact, look forward to a comparatively new development of bacteriological science as coming within the range of practical medicine—a development that, in its bearings on medical practice, must have most far-reaching results

FACTA NON VERBA.

We have received communications from several quarters pointing out what is, indeed, only too apparent—that the scientific and public interest in the remedy for tuberculosis introduced by Dr. Koch is being utilized pretty extensively by many who should know better, for purposes and by methods which cannot easily be differentiated from those of public and personal advertisement. This is obviously true, both here and abroad. Some allowance must, of course, be made for the exceptional nature of the circumstances, and the intense public interest aroused all over the world by the pronouncement of this distinguished observer of a probable cure for a disease which has so long been an almost irremediable scourge of the human race, and the far-reaching vista which this announcement opened up in many directions. It is more than time, however, that means should be taken to abate the proceedings referred to, and the good sense of physicians throughout the world will lead

them to refer to the ordinary rules regulating conduct in the discussion of remedies *sub judice*, and the avoidance of anything savoring of personal advertisement. It is sufficiently clear that much time must elapse, with rigorous observation during that lengthened period, before conclusions can be safely drawn either as to the sphere of utility or the complicated perils of the process. Meantime the professional tribunals—the societies, lecture-rooms and journals—of the profession are those which should be sought, rather than the public verdict on a subject on which only the technically skilled and educated can form a judgment. The excitement which so momentous an issue could not fail to raise has led to much premature proceeding, and until a mature judgment can be attained, silent work will show to advantage over hasty public utterance.—*British Medical Journal.*

PROFESSORS VIRCHOW AND HELMHOLTZ.

Our Berlin correspondent writes: Professor Rudolf Virchow's 70th birthday will be celebrated with due honors on October 13 of this year. Professor Waldeyer, Drs. W. Reiss, Bartels, Langerhaus, Ad. Meyer, and Professor B. Fraenkel have issued a circular inviting friends and admirers of the great pathological anatomist to subscribe to a gift of honor, which is to take the shape of a golden portrait medal (about 19 centimeters in diameter). We understand that a committee is in course of formation in London under the presidency of Sir James Paget, to enable his English admirers to participate in the compliment. Professor R. von Helmholtz's 70th birthday will also fall this year on August 30, and will, no doubt, be celebrated with the honors so eminently his due.—*British Medical Journal.*

A LEPROUS VILLAGE.

M. Boinet states that leprosy is rare in the mountainous parts of Tonquin, but frequent in the delta, and that the lepers live in villages situated in the environs of some large populous centres. The most curious of these is situated two kilomètres from the French concession of Hanoi, the inhabitants numbering 400, almost one-half of whom are affected with leprosy, the remainder being composed of infirm persons and beggars. According to the statements of the chiefs of the village, leprosy is often transmitted hereditarily. Eighty to ninety per cent. of the children of lepers contract the disease, which usually appears for the first time about the eleventh year, and rarely develops after the age of 40, exceptionally before the age of three years. Boinet traced heredity only in 15 out of 80 observations; but he recognizes that these figures are not sufficient, for lepers who come from the neighboring villages do not readily acknowledge heredity, and reliable information is impossible. Anæsthetic leprosy is more often hereditary than tubercular leprosy. Boinet concludes that heredity is of slight importance in the development of leprosy, many cases called hereditary being only examples of "heredo-contagion" or simple contagion, the proof of which lies in the late development of leprosy in the children of lepers and in their relative immunity when removed in time from their parents. With regard to this, Boinet states that certain lepers whose resources permit them to do so send their children from the lazaretto as soon as they are weaned, to prevent their contracting leprosy. The lepers of Hanoi doubt the contagiousness of leprosy, and the chiefs of the village, who are interested in denying it, affirm that there has not been a single case of contagion. Boinet, however, in 80 observations made by him, found the possibility of contagion in 51, and in 5 of these contagion appeared clear. Boinet gives particulars regarding cultivations of the bacillus lepræ on agar-agar. If his experiments are accurate, it would appear that the bacillus lepræ develops in stagnant water and in rivers, which he thinks would explain the fact that there are seen at Tonquin leprous foci along the course of small rivulets.—*Lancet.*

THE SIEGE OF MAYENCE.

The *Archives of Military Medicine* recently gave an interesting account of the medical history of this siege in 1793. The medical officer in charge of the hospital says: "On the 11th of April there was a dreadful cannonade. Amongst the number brought us with enormous wounds—and the number was not inconsiderable (in less than an hour, eight for various amputations)—was a little volunteer with great courage, although suffering terribly. I ordered that he should be undressed while I went round the ward to glance at the various operations which the assistant surgeons were performing. Returning to him with Citizen Rivière, who was to perform the operation, we perceived an enormous lower limb, enormous from the unusual amount of swelling. Manipulating the limb, we came across a hard swelling, which we took to be caused by a grapeshot ball lodged in the limb. Our astonishment was great when we found that an incision of five or six fingers' breadth was insufficient to extract this enormous foreign body, which, on being finally got out, turned out to be a Prussian ball weighing no less than thirteen pounds! How could a mass of this size have just the amount of force necessary to lodge in a thigh and not pass through it! This problem I leave to natural philosophers, but I admit it to be almost necessary to have seen such things to believe them. Of course there was nothing for it but to operate on this poor fellow or leave him to certain death; we therefore amputated high up. When we had finished he asked if it was done, and on being told that it was, he cried out loudly, 'Long live the nation!' Anæsthetics had not then seen the light, it must be remembered. On another occasion the firing of a mine caused a tremendous explosion, which shook the hospital building terribly. At that moment I was engaged in amputating the limb of a soldier. As I was sawing the bone amidst the general confusion caused by the first shock, a second occurred which brought down the whole of a glass skylight over the patient and myself. Not knowing whence all the glass came, I asked those standing around what was the matter. The patient overheard me, and said, 'Go on, don't alarm yourself, you will see plenty of this kind of thing.' When I had finished the operation he cried, 'Vive la République!'"—Paris Correspondence, *Lancet.*

SOCIETY PROCEEDINGS.

St. Louis Medical Society.

Stated Meeting, Saturday Evening, Feb. 7, 1891.

THE PRESIDENT, L. BREMER, M.D., IN THE CHAIR.

VESICO-VAGINAL FISTULÆ.

DR. BOND said: The subject of vesico-vaginal fistulæ is a subject that has not lately received much attention by discussion or by the pen, and it is an affection which to the sufferer is almost intolerable. The condition of a woman with water constantly escaping from the bladder through the vagina occasions a degree of discomfort almost inexpressible; considering the great difficulty that in many cases is encountered in relieving this condition, it is important that those gentlemen who attempt to operate for the cure of vesico-vaginal fistulæ should have a clear appreciation of special conditions that prohibit or prevent the best results.

During the International Congress that met at Washington City special attention was directed to the influence of constricting bands in the vagina in compromising successful results, by a very elaborate paper read by Dr. N. Bozeman, of New York City, on this subject. In it he emphasized the necessity of dilatation by means of sponges inclosed in rubber bags and introduced into the vagina, and also the necessity of dividing any cicatricial bands that distorted the parts and prevented ready access to the fistula on which he desired to operate; or that might produce undue tension upon the sutures after they were placed.

An illustration of the value of those instructions was found in the case of a lady commended to him, who for several years had suffered from a vesico-vaginal fistula resulting from a protracted labor. She had already been operated upon, but unsuccessfully. The fistula was an inch and a half in length across the vagina, high up in the vagina, close to the cervix, and considerably removed from the arch of the pubes. The finger being introduced discovered a cicatricial band, the sequel of a posterior laceration of the cervix. In consequence of the vaginitis, cellulitis and pelvic peritonitis that occurred a firm union had taken place between the posterior portion of the cervix and the posterior fornix, and by the same process the cervix was drawn high up in the vagina, towards the sacrum, in which the utero-sacral ligaments were also implicated. It would have been utterly impossible to make a satisfactory operation had not the constricting, cicatricial band been first divided. On the 28th of December this band was divided, the cervix thoroughly liberated, and several cicatricial bands in the lower portion of the vagina, that had a tendency to constrict the vagina laterally, were divided, and by that means more space was gained. The amount of bleeding was so great that it obscured the field of operation and prevented the completion of the operation at the time; this was postponed only till the bleeding had entirely ceased, and before the healing process had been instituted to any great extent, or before a cicatrix had formed. Accordingly, three days after the preliminary operation, the operation was continued, the patient being placed on her back. A vulsellum was engaged in the anterior lip of the cervix and the fistulous opening readily brought down near the orifice of the vagina; in this position of the part no trouble whatever was experienced in performing the operation—denuding the margins of the fistula and passing the sutures. Eight or ten silk sutures, antiseptically prepared in a 2 per cent. solution of carbolic acid, were inserted. The patient was then kept upon her back for more than twenty days, with a soft rubber catheter constantly in the bladder, but frequently changed, one catheter not permitted to remain in the bladder more than four hours. Though the patient was an exceedingly nervous, sensitive individual, she yet bore the presence of the catheters very well. About a week after the operation was performed, a slight leakage through the vagina was obtained. The stitches were not removed, however, until the tenth day, when the union was almost complete, so complete that the point through which the water escaped could not be detected; and though assured that contraction would continue and would result in the entire arrest of the escape of water, prudence dictated the continuance of the use of the catheters that the bladder might not be distended and thus retard union. The result was all that could be desired, the woman recovering entirely from the fistula.

The secret of the success of J. Marion Sims, one of the pioneers in this department of surgery, was attributed to the fact that he used silver wire sutures. At that time the agency of sepsis in vitiating operative results was not distinctly recognized; nor was it understood why success seemed to follow the use of silver wire sutures, while failures attended operations in which the silk or any other form of suture was employed. Now it is well established that when silk sutures, antiseptically prepared, are used, the result is just as good or better than after the use of silver wire; with the additional advantage of being more easily manipulated.

The speaker stated he desired to call especial attention to the importance of a thorough division of the cicatricial bands. In the case under consideration it would have been utterly impossible to approximate the margins of the fistulous opening with security without first dividing the cicatricial bands, because the tension induced by the operation would, of necessity, be thereby super-

added to that already existing in the anterior vaginal wall. This omission was unquestionably the reason of the failure of the operation previously performed, which became apparent on the second day thereafter, the sutures having cut through the tissues.

DR. A. H. MEISENBACH said that the non-union in such cases as have been referred to by Dr. Bond may occur from the factors assigned, or it may be due to the fact that the fistula may be in such a situation that it is not readily accessible through the vagina. The speaker said when in Baden he had an opportunity of seeing a patient upon whom Trendelburg had operated for vesico-vaginal fistula. He placed the patient in the position for section of the bladder, the so-called Trendelburg position, viz., by elevating the hips very high and letting the head hang down on an inclined plane; by this means the weight of the intestines gravitates from the bladder, and thus very materially enlarges the space by reason of the traction made by the abdominal viscera on the peritoneum. In this position he cuts down on the bladder and has had great success by using this position in operations for stone. Having a patient suffering from vesico-vaginal fistula, who was in such a state thas it was impossible to reach it satisfactorily through the vagina, he hit upon this very novel position of opening the bladder, placing the sutures and reuniting the wound on the vesical surfaces, and then having introduced a catheter the operation was complete, and a perfect result obtained, as he saw the patient ten or fourteen days after. Trendelburg tested the bladder for continuity by injecting from four to six ounces of water, and it held the water perfectly. Silk sutures were used and tied in the bladder, the supra-pubic method being adopted.

In operations where very firm apposition of the parts is desired, catgut is not always to be trusted for the reason that great force must be exerted to bring the parts together; and besides on account of its absorbent qualities, one can be sure that he has tied the suture tight enough, and that in a little time the suture may not absorb moisture, and, in consequence of the loosening of the knot, the suture becomes loosened. It is very difficult to handle wire sutures, from the fact that correct apposition of the edges of the wound can not with confidence be obained with it; the use of a certain amount of force in applying it often produces laceration of the tissue; failures are, therefore, often due, not to the wire, but to the lacerated tissue. It is very hard to determine just exactly how tight to apply the wires.

DR. WILLIAM JOHNSTON: Dr. Bond says that Sims was the pioneer in operations on vesico-vaginal fistulæ. Dr. Jobert, of Paris, operated for this affection in 1837; also Sir James Young Simpson later adopted it, and Dr. Bozeman still later operated, but not by the same procedure as Dr. Sims.

DR. BOND: It is a fact, sir, that to Dr. Sims is due the just credit for popularizing the operation for vesico-vaginal fistulæ. He first operated upon Negro women in the South, and, after achieving numerous successes, he went to New York and there taught the physicians his method of curing vesico-vaginal fistulæ. He afterwards went to Paris and successfully operated on Empress Eugenie after European surgeons had failed, and thus acquired a world-wide reputation in consequence of his success.

As to the position that Dr. Meisenbach mentions in regard to the operation that he refers to, one insuperable objection to the method of procedure of Trendelburg would be the fact of the impossibility of removal of the sutures, for these, if allowed to remain in the bladder, would constitute nuclei for the aggregation of the salts of the urine, and thus stones would be generated unless the supra-pubic opening was left open until the sutures could with safety be removed. What is the method of getting rid of the sutures?

DR. MEISENBACH: The suggestion of leaving the supra-pubic opening until the sutures could be removed would be a procedure perfectly feasible. Only about ten days are required to secure a firm union if the operation has been successful, and as regards the formation of calculi, even should they generate their removal by modern devices of surgical art is very readily accomplished.

A SPECIMEN.

DR. BLICKHAHN said: The specimen I present for inspection was from a patient of Dr. Pohlman's who was kind enough to furnish me the clinical facts. Dr. Edward Evert, who made the autopsy, has kindly detailed the post-mortem appearances. This heart and its aorta belonged to a man, aged 30, a blacksmith by occupation. He had always been in good health, with the exception of a cough which occurred several years ago, due to bronchitis, the result supposedly of the inhalation of dust and smoke while following his occupation; the cough while it continued was quite severe, but disappeared completely under treatment for the bronchitis. On January 31, the patient worked as usual, and in the evening went to the Union Depot to meet a relative. He drank several glasses of beer, appeared in good health and spirits, and retired 11 P.M. Early Sunday morning, February 1, he awoke suddenly with great pain and dyspnœa. Dr. Pohlman was sent for and on his arrival found the patient cyanosed and suffering from great dyspnœa, cold extremities; no radial or temporal pulse, and only a slight undulation of the carotids. The patient's condition forbade much physical exploration, and no acurate diagnosis of the difficulty was attempted, the attending physician believing death about to ensue and so informed his friends. He,

however, injected ether and whisky subcutaneously, remained with the patient about an hour and then left, expecting, on his return some hours later, to find his patient a corpse. By afternoon, however, the condition of the patient was greatly improved; the pulse was perceptible, the cyanosis less, and respiration less embarrassed, etc. His improvement was steady, and the patient in a short time insisted he was well, and wanted to go to work a day or so later. The doctor insisted he had not satisfactorily diagnosed his malady, the symptoms being still very grave, and he insisted on the patient remaining in bed, etc. The third day the patient got up and walked about the room, feeling, as he said, perfectly well. He awoke in the night, however, of Tuesday or Wednesday, with great dyspnœa and cyanosis. Dr. Pohlman was again summoned, but the patient died before he arrived.

The post-mortem revealed nothing of special import until the pericardium was opened. The heart sac was bluish in color, and when opened it was found filled by large coagula; through this the heart was reached, and lifted out; the heart was replaced and examined from the outside. There was dilatation of the aorta; and inside the sac just after it leaves the heart, there was observed an aneurism and a small irregular opening of the size of a small pin's head, from which the hæmorrhage had taken place. The heart otherwise was found in a healthy state.

DR. BOND inquired: Can Dr. Blickhahn give the history of the case as to the possibility of syphilis on his part or that of his parents.

DR. BLICKHAHN replied: From hearsay I learned there was no syphilitic history in the case, though the gentlemen who saw the case earlier, and made the post-mortem, were of the opinion that there might have been syphilis.

DR. BREMER: The question of syphilis is always the one that is uppermost in the mind of an inquirer after truth in such cases. He believed that there is almost no case of diverticulum of the heart, as it was formerly called—or aneurism, which could not be traced to syphilis—not a well authenticated case. In most cases syphilis certainly is the cause, either hereditary or acquired. He had known a case of hereditary syphilis in which the individual died from aneurism of the aorta; that is the only case he had met with in his own practice.

DR. BROOME said that some cases of aneurism are met with, which clearly are not due to syphilis, nor to any known cause. He had now under observation a case in which there is positively no history of syphilis, though the etiology is obscure. The aneurism is from the arch of the aorta and is of enormous size, larger than any heretofore recorded. Subjective symptoms had been manifest for a year and a half; but a palpable tumor appeared only about one year ago. Its increase in size has been so rapid and great, that pressure on the thoracic walls has occasioned absorption of the entire anterior halves of six ribs, a portion of the sternum and also the sterno-clavicular articulation; the sternal extremity of the clavicle being pushed up against the thyroid cartilage. The patient now complains but little of pain, but previous to the escape of the tumor beyond the contour of the ribs, his suffering was very great in consequence of mechanical pressure of the aneurismal tumor exerted within the thoracic cavity. The doctor endeavored to introduce a silver wire into the sac, but owing to the presence of septa within its cavity, the resistance was greater than could be overcome without exercising undue force. Ordinary piano wire is probably the best, of which from ten to twenty feet might be introduced so large is the sac. Macewen claims to have returned several patients to hard work, apparently completely cured of their aneurismal tumors by his method of treatment. This consists of the introduction and retention of a long needle into the sac just deep enough to strike the opposite wall. The needle is thus practically suspended in the sac, and in consequence of the motion of the blood current being thereby rendered by it tumultuous and disseminated, irritation is set up in the vessel wall, and leucocytes is induced. This process continuing, superimposed accretions of fibrine generated, and a partial thrombosis progresses until complete occlusion of the sac occurs. The method suggested is simple, besides devoid of danger, and appears to be full of promise.

DR. CADWALLADER stated that he had in his possession a specimen taken from a patient who gave a rheumatic history of several years' duration, with a marked disturbance of the heart. He discovered, in making a post-mortem, an aneurism or diverticulum on the superior surface of the left ventricle as large as a walnut. The patient died from some other trouble unconnected with it.

DR. BREMER: No poison circulates in the human body, nor is there any factor that tells to such a degree and with such an intensity upon the vessels, as does syphilis; and next to syphilis comes alcohol. The syphilitic lesion is very frequently confined to the muscular layer of the vessels. The muscular layer is infiltrated and, in consequence, there is a shrinkage of the muscle fibres; there being no resisting power, no elasticity, the blood pressure will have the effect of pushing out and dilating the connective tissue membranes, which have been formed in place of the muscular membrane. In that way miliary aneurisms, when they occur in the brain, prove very frequently fatal. In the same way the larger aneurisms are formed. It is true that traumatisms are sometimes the cause of aneurisms, traumatisms which may not be noticed; but the so-called idiopathic aneurisms are probably all due

to syphilitic infection, which, in a great many instances, is a matter unknown to the patients themselves.

DR. BOND: Did I undertand you to say that the retrograde metamorphosis incident to syphilis was represented by the conversion of the muscular element into connective tissue?

DR. BREMER: The muscular elements disappear at the site of the lesion, and very frequently in the muscular coat; such is the case in gummata, for instance. The gummata afterwards breaks down to some extent, then connective tissue is formed; and the blood current, the *vis a tergo*, dilates the connective tissue which has been formed. When the connective tissue is in a fresh state—an embryonic state—in a fibro-plastic state—it is very soft, and can be pushed out and a pouch very easily formed.

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM OUR REGULAR CORRESPONDENT.)

Lectures on Nursing—The Electric Light and Human Ailments—The Treatment of Burns—Co-operation and the Nursing Profession—Sir Richard Quain—Diverticulum of the Œsophagus—The Midwives' Registration Bill—Miscellaneous Items.

Several of the National Health Society's lecturers are now giving lectures on nursing in the provinces—at Horstead for Lady Berkbeck, at Dedbury for Lady Henry Somerset, and also at Norwich. The lectures are attended by hundreds of ladies. The "homely talks" which follow the set discourses are especially intended for the working women of the districts, and many of the cottage wives and mothers show an earnest desire to be better informed on the important subject of nursing their sick.

The electric light is stated to exercise a most soothing influence over human ailments. According to a medical man, by reflecting the rays of an incandescent lamp upon the sufferer, acute pain is relieved in a few moments. For example, a headache will yield to the treatment in from ten to fifteen seconds, a strong concentration of light on the seat of a malady in any other part of the body will effect a temporary cure in five minutes, and even consumptive patients find their cough quieted and the breathing easier. The light is directed to the affected region through a funnel-shaped apparatus. The treatment is stated to have been tried in Moscow.

In one of the large London hospitals the following method of treatment for burns has been tried with success: The burned surface is first carefully washed with a 2 or 3 per cent. solution of carbolic acid; or with a 3 to 1,000 solution of salicylic acid. The blisters are then opened and the entire surface covered with subnitrate of bismuth finely powdered, and over this a layer of cotton wool. This dressing is to be renewed as soon as it becomes at all moistened by discharges from the wound. If the burn is very extensive, an ointment of bismuth is substituted for the dry powder. With this dressing cicatrization is found to be much more rapid, and the suffering of the patient much more quickly relieved than is the case with any other form of treatment. It is found that in spite of the large quantities of subnitrate of bismuth which are employed in this manner, up to the present no case of "bismuth poisoning" following its use has occurred.

At once pathetic and pleasing was the spectacle presented at King's College Hospital, on the occasion of the patients' annual Christmas-tree entertainment, the cost of which was borne almost entirely by the students attending the institution. By the judicious use of artistic hangings, Chinese lanterns, evergreens and flowers, the wards were made to look exceedingly bright and pretty. The patients able to leave their beds were accommodated in the area of the great hall, while those less fortunate were provided with couches in the three surrounding galleries, so that they might share in the enjoyment derivable from an entertainment to which several members of the dramatic profession contributed. Many of the visitors inspected the wards containing patients who had been inoculated with Koch's lymph, which in certain tubercular diseases has been markedly beneficial.

Coöperation is now extended to the nursing profession. Some nurses have combined on a plan which will enable them to receive their own earnings in full, subject to a slight deduction for working expenses. That they are good nurses is guaranteed by the fact that Miss Hicks, the late matron of the Ormond Street Hospital, is their lady Superintendent. It is said that nurses who earn two guineas a week sometimes receive for themselves no more than £20 a year.

Sir Richard Quain, the new medical baronet, is one of the members of the medical profession who is most popular outside his profession. For many years he has been *persona grata* in literary, artistic and official circles, and has numbered among his friends or acquaintances most of the great artists and men of letters of the last two generations. For in spite of his iron-gray hair, active habits and untiring energy in the discharge both of his professional and social obligations, Dr. Richard Quain must have already exceeded the Psalmist's span. At Mallow, Sir Richard first saw the light, and his first introduction to medical practice took place in Limerick. He soon found his way to London and quickly began to make his mark, being for some years the right-hand man of the late Dr. C. J. B. Williams, and

then one of the physicians appointed at the institution of the Hospital for Consumptives at Brompton. For many years now he has possessed one of the leading consulting practices in London. His *magnum opus* is the famous "Dictionary of Medicine," which took some ten or twelve years to prepare, and in the production of which he obtained the assistance of most of the best known medical writers.

At the Pathological Society's meeting, an interesting and rare specimen of diverticulum of the œsophagus, taken from the body of a man aged 49, was shown. The patient, who was much emaciated, and on whom gastrostomy was performed in July, 1890, had given a history of dysphagia extending over a period of ten years. Death occurred two days after the completion of the operation, from pneumonia and exhaustion. The autopsy showed a diverticulum of the back part of the œsophagus 4 inches in depth from the level of the arytenoid cartilages, 3½ inches in breadth and 2½ inches in thickness, with a mouth 1 inch in diameter and a capacity of 6 ozs. The walls of the sac were lined throughout with mucous membrane, and were of the same thickness as those of the œsophagus. When the enlargement was filled with fluid the opening in the œsophagus was firmly closed by the pressure of the distended sac. There was no malignant growth present. The absence of muscular tissue except at the mouth of the sac, supported the contention that posterior diverticula were primarily due to effects of pressure, and not to congenital defect, as held by some authorities.

Dr. G. N. Pitt has published some notes on the post-mortem appearances in chronic alcoholism. *Prima facie*, the chronic dyspepsia and irregular habits of these patients would lead one to expect that their mortality from phthisis would be high. The Registrar General's Reports, however, showed that the mortality from phthisis of publicans and others whose occupations exposed them to special temptations to drink, was rather below than above the average. But acute tuberculosis and pneumonia were very prone to occur in such patients, and the tuberculous nature of the disease might often be overlooked during life. Dr. Pitt concludes that tubercular lesions in the lung in alcoholic subjects generally assume a fibroid form, and that tubercular lesions are not infrequently associated with alcoholic neuritis and hepatic cirrhosis.

The Manchester Medico-Ethical Association, numbering 150 medical men practicing in Lancashire and Cheshire, have taken alarm at the "Midwifes' Registration Bill" now before Parliament, and are organizing an opposition to that measure. Sir Walter Foster, M.D., has withdrawn his name from the back of the Bill, and it is stated that others interested in its promotion are persons "having little experience of family practice." It is also alleged that the General Medical Council has declined to support the Bill, and that the Royal College of Physicians has also repudiated it. In the view of the Association, the measure is a plan for avoiding the extended educational course necessary to qualify any one to treat the diseases of women and children, and that the Bill is to be used as a "back door entrance" for women to the medical profession.

"The Coming Race" is the name appropriated to a bazaar and fancy fête at the Royal Albert Hall, in aid of the West End Hospital and School of Massage and Electricity. The arrangements include a festival dinner to which ladies will be admitted. The fête will be opened on March 4 for four days.

The Swiss Federal diploma which gives the right of practice has been granted to Dr. Holland, of St. Moritz. This act on the part of the Swiss authorities ends a long controversy.

Sir George Humphry, of Cambridge, the new medical knight, has been invited to a congratulatory dinner by the Cambridge Medical Graduates' Club. Among the guests invited is the Vice Chancellor of the University of Cambridge.

G. O. M.

NECROLOGY.

DR. WILLIAM J. MCCLURE, University of Maryland School of Medicine, Baltimore, (1866), Health officer of York, Pa., and member of the Legislature from Adams County in 1878, died January 24, aged 52 years.

DR. N. M. BEMIS, of Fairbault, Minn., died January 29th, aged 69 years. He was a native of Massachusetts, and graduated at Woodstock, 48 years ago. He moved with his family to Minnesota in 1855 where he has been in active practice up to a few weeks before his death. He was father of Dr. J. G. Bemis of Chicago.

DR. PIERSON RECTOR, President of the Board of Pension Examiners, Jersey City, N. J., died in that city, January 22, of pyæmia, due to a surgical accident while in attendance upon a charity patient. He was born in Duanesburg, N. Y., 52 years ago and was educated in the Racine College and the Albany Medical College. During the war he was Assistant Surgeon 115th Regiment N. Y. Volunteer Infantry, but was transferred with the same rank in February, 1864, to the 127th Reg't. Vol. Inf't., of the same State, receiving his discharge December 14, 1864.

MEDICAL DIRECTOR JONATHAN DICKINSON MILLER, U. S. Navy, (retired) died January 29, at his home, Mount Airy, near Philadelphia. He was a native of New York, was commissioned as-

sistant surgeon December 6, 1836, and assigned to the North Carolina, in the Pacific squadron. He was passed in 1841 and assigned to the Naval Hospital, Brooklyn. In 1843 he was ordered to the brig Perry of the East India squadron. He was again promoted in 1847 and ordered to the Gulf of Mexico. He served continuously till November 6, 1872, when he was placed upon the retired list.

DR. CHARLES C. LANCASTER, an alumnus of the Medical College of Virginia, class of 1884, died February 3, at Knoxville, Tenn. He was poisoned by a gangrenous wound, which he had surgically treated, through an abrasion under his finger nail.

DR. ALVIN TALCOTT, the most distinguished although not quite the oldest surviving citizen of Guilford, Conn., died there Jan. 17. He was born in Vernon, Conn., Aug. 17, 1804. He was graduated at Yale in 1824, and from the Yale Medical School in 1831. He began to practice in Vernon as successor to Dr. Dow. Dr. Talcott had taught in Guilford during his college course, and there married Miss Olive Chittenden, on March 7, 1831. He settled in Guilford about 1840, and became a successful practitioner. He began early to search out the genealogy of the Guilford families. He wrote out in manuscript the full family lists, as far as obtainable, of all Guilford's forty original settlers of 250 years ago. This notable genealogical work is embodied in an imperial quarto containing over 25,000 individual names. It is understood that it is bequeathed to the New Haven Historical Society. Dr. Talcott was many years secretary and treasurer of the Board of Trustees of Guilford Institute, himself an active and ready classical scholar. For some years he held the office of Town Register. He had three children—one son and two daughters—who died at an early age, Mrs. Talcott having passed away December 8, 1882.

DR. NATHANIEL R. BOUTELLE, Jefferson Medical College, 1847, died at his home in Waterville, Me., December 21, of paralysis. Besides being an active practitioner, he was a bank president, and an enthusiastic stock breeder.

BOOK REVIEWS.

A TEXT-BOOK OF COMPARATIVE PHYSIOLOGY FOR STUDENTS AND PRACTITIONERS OF COMPARATIVE (veterinary) MEDICINE. By WESLEY MIMMS, M.D., D.V.S., etc., Professor of Physiology McGill University. With 476 Illustrations. New York: Appleton & Company, 1890. Pp. 636. $3.00.

This compact and thoroughly well arranged volume will be a desirable addition to any library. Though written for veterinarians it is based of necessity on human physiology, and the recent contributions to this department of knowledge are clearly set forth. The author's style is terse and entertaining, carrying one along agreeably over what otherwise would be dry, statistical and unentertaining. The illustrations, though rarely original, are well selected, and graphic demonstrative methods are emphasized.

THE EXTRA PHARMACOPŒIA.—With the additions introduced into the British Pharmacopœia, 1885. By WILLIAM MARTINDALE, F.S.C., late Examiner of the Pharmaceutical Society and late Teacher of Pharmacy and Demonstrator of Materia Medica at University College. Medical References and a Therapeutic Index of Diseases and Symptoms. By W. WYNN WESCOTT, M.B. Lond., Deputy Coroner for Central Middlesex. Sixth Edition. London: H. K. Lewis, 136 Gower st., W. C. 1890.

This concise little volume is familiar to American as well as to English physicians, the present edition numbering the thirty-sixth thousand copies.

The necessary revisions have been made. The derivatives obtained from coal, tar and alcohol, which are now so prominently presented as new remedies, are incorporated in the text. The volume is compact in form, with flexible morocco cover, and can be conveniently carried in the pocket. The posological tables are very complete, and the Therapeutical Index at the close of the volume will be found helpful, as suggestive of appropriate remedies, especially in times of emergency.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS; WITH ESPECIAL REFERENCE TO THE APPLICATION OF REMEDIAL MEASURES TO DISEASES, AND THEIR EMPLOYMENT UPON A RATIONAL BASIS. By HOBART EMORY HARE, M.D., (Univ. Pa.), B. S. C., Clinical Professor of Diseases of Children and Demonstrator of Therapeutics in the University of Pennsylvania, etc.

This valuable and practical work of over six hundred pages is published by Lea Brothers & Co., in their usual creditable style. The aim of the author has been in a very effectual way to bridge the chasm which lies between the theory and the practice of medicine. To this end the physiological actions of remedies are clearly set forth so far as they are known, and the pathological condition in which their use is indicated, are concisely described. The reason why in particular stages of diseases particular remedies are required is just that which the young physician most needs to know, and the ready reference to the drug that shall meet that requirement, and the reason for its use, is just the instruction which

raise one from empiricism to the higher plane of rational practice.

We can heartily commend the work for its intelligent and reliable review of the prominent therapeutical agents in use, and for its intelligent explanation of the reasons for their administrations in the treatment of diseases. The remedies considered are arranged in alphabetical order, as are also the diseases to which reference is made. A valuable portion of the work is that devoted to remedial measures other than drugs and to the consideration of goods suitable for the sick. A table of doses of remedies and a copious index add to its value and convenience. An examination of the work will ensure approval, and as a practical reference book it will be found helpful.

ASSOCIATION NEWS.

American Medical Association.

Forty-Second Annual Meeting, at Washington, May 5 to 8, 1891.

LOCAL COMMITTEE OF ARRANGEMENTS.

D. C. Patterson, M.D., *Chairman;* C. H. A. Kleinschmidt, M.D., *Secretary.*

SUB-COMMITTEES.

Registration.— Drs. Bulkley, J. O. Adams, Bovee, Herman H. Cook, Eliot, J. D. Morgan, Manning, J. D. McKim, Mallan, Osmun, Ober, Radcliff.

Finance.—Drs. Stanton, B. B. Adams, Balloch, Crook, Chamberlin, Harrison, Hood, Magruder, Newman, Sowers, Toner.

Entertainment.—Drs. Prentiss, Bromwell, Deale, Fenwick, Franzoni, Hyatt, Johnston, H. L. E. Johnson, Richardson, Rixey (U. S. N.), Witmer.

Transportation.—Drs. Hawkes, Acker, Burnett, Lee, Mundell, Townshend, Jas. T. Young.

Hotels and Boarding Houses.—Drs. Reyburn, Bracket, Friedrich, Leach, Lamb, Murphy, Sothorn.

Reception.—Drs. Lincoln, Bryan, Fry, A. Hegar, U. S. A., J. T. Johnson, Loring, Mackall, Marmion, Peter, A. C. Patterson, Rosse, T. R. Stone, T. C. Smith, Walsh.

Place of Meeting of Sections.—Drs. Lovejoy, Beatty, Bayne, Callan, Hill, D. H. Hazen, H. Leach, McLaughlin, J. C. McGuire, Neale, Spriggs, J. T. Winter.

Information.—Drs. Hickling, B. B. Adams, S. W. Bogan, Byrns, Neale.

Exhibits.—Drs. Patterson, S. A. H. McKim, Stanton, Toner.

Printing.—Drs. Hamilton, Barker, Briscoe, W. P. C. Hazen, Henderson, Poole.

The several Committees, as well as the Committees as a whole, have met and mapped out the work in hand for the accommodation of the Association. The General Meetings will be held in the auditorium of Albaugh's Opera House, the basement of which having been secured for the exhibits.

SPECIAL CORRESPONDENCE.

The Effects of Anæsthetics Modified by Altitudes.

To the Editor:—The case which I desire to report caused much unfavorable comment in the community where it occurred, namely, one of the high mountain cities of Colorado—elevation 10,000 feet. Surgeons use chloroform at these extreme elevations almost exclusively. For some occult reason ether, or any of the anæsthetic mixtures do not act well, and are considered by common professional consent dangerous; not because they have frequently produced death, but because of the enormous quantity necessary to produce anæsthesia. For this reason chloroform, which causes complete insensibility very speedily, and in small quantity, is mostly used.

On January 18 of the present year a man of 37 years of age was placed under the influence of chloroform for operation for organic urethral stricture in the spongy urethra. The stricture was of small calibre and the individual had had several attacks of retention following debauches. In the course of the chloroform the subject presented no symptoms of an alarming character until efforts were made to operate by the cutting method when, suddenly, the respirations stopped, a few convulsive shudders, a few flutters of the heart, and the patient was dead. Artificial respiration, ammonia by hypodermic injection, and the interrupted current failed to give the slightest encouragement, as a means of resuscitation.

These matters came to my knowledge as coroner's medical adviser, popular indignation demanding investigation and prosecution criminally of the unfortunate medical attendant. The post-mortem examination revealed heart dilatation, enlarged spleen, liver—results of chronic alcoholism. As chloroform is given in this locality many times each month, and as this is the first recorded death in ten years from chloroform, it has attracted more than ordinary public attention.

M. H. SEARS, M.D.

Leadville, Colorado.

Dislocation of Long Bones.

To the Editor:—In No. 6, Vol. 16 of THE JOURNAL I find a communication from Dr. Murdock to the Allegheny County Medical Society giving the details of the reduction of the dislocation of the head of the right femur upon the dorsum of the ilium by extension and counter extension; which brings forcibly to my mind two principles laid down by two eminent men in regard to dislocations of long bones. One by the late lamented Prof. Moses Gunn, of Rush Medical College, Chicago, to-wit, always make extension in the line of deformity. The other, by the late lamented and eminent George Sutton, M.D., of Aurora, Ind., which is: In reduction of the head of the femur or humerus, use a fulcrum in the groin or axilla by which the long arm of the lever, the femur or humerus, as the case may be, can be used efficiently. In the case cited by Dr. Murdock both of these principles were brought to bear. The foot of the young medical student in the groin was the fulcrum and extension was made in the line of deformity. When the thigh of the dislocated limb was brought across the thigh of the sound one the pressure necessary

to effect this was sufficient, acting on the long arm of the lever, the femur pressing on the fulcrum, the student's foot, to raise the head of the femur over the lip of the acetabulum, and all extension then had to do was to cause the head of the femur to travel back through the rupture of the capsular ligament and drop into its place in the acetabulum. The position the dislocated limb was made to take also relaxed the V ligament.

This case also is a confirmation of the position taken by Dr. McCann in the discussion, contrary to the position of Dr. Murdock, that dislocation does not take place at any other point than at the lower and anterior portion of the acetabulum. In the case cited if the capsular ligament had not been ruptured externally and upwardly the means used for reduction would not have been successful, but if it had been torn inferiorily and anteriorily it would have been reduced by manipulation if a fulcrum had been used in the groin.

JAMES LAMB, M.D.

Aurora, Ind., Feb. 17, 1891.

Absence of Uterus.

To the Editor:—The interesting case reported in No. 8 of THE JOURNAL by Dr. McShane, of Carmel, Ind., recalls to mind a case I had a few years since. A lady, aged 24 years, consulted me to ascertain why she could not have children. She had been married six years, was well developed, not masculine; breasts were normal, the pudendum normal, and well covered with hair.

I found by digital examination a good-sized vagina, but no cervix uteri; in fact, there was nothing but a smooth, well-arched vagina, about 4 inches in depth. I introduced a sound into the bladder, and with my finger in the rectum I could readily feel the sound, showing that there was complete absence of the uterus.

Having been a member of the Association for several years, I think it best to let well enough alone and publish THE JOURNAL at Chicago.

H. W. CARPENTER, M.D.

Oneida, N. Y.

A "Practical Note."

To the Editor:—I am very glad to see your "Practical Notes." Keep it up and enlarge, and as you have one for carbuncle I will try to help you out with mine. In 1855 Stone and Hunt, of New Orleans, taught the + incision. I keep it up under cocaine. Now then fill the carbuncle full of dry salicylic acid, it completely dissolves all the hard white tissue; wash it away with sublimate soap and hot water; fill cavity with peroxide of hydrogen; when bubbling ceases sponge out with cotton; dress with basilican ointment and as soon as matter reforms repeat acid, etc. It makes a rapid and painless cure.

A. P. BROWN, M.D.

Fort Worth, Tex., Feb. 19, 1891.

Shall The Journal be Removed to Washington?

THE ACTION OF THE CHICAGO GYNECOLOGICAL SOCIETY.

The following resolutions, formulated by a committee appointed at a preceding meeting, were adopted by the Chicago Gynecological Society February 20, 1891:

WHEREAS, There is a disposition on the part of a portion of the Board of Trustees of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION to move THE JOURNAL from its present place of publication, Chicago, to Washington, D. C., and

WHEREAS, The Board of Trustees invites a free discussion in the columns of THE JOURNAL, with a free expression of opinion from societies and individuals, be it therefore

Resolved, That it is the opinion of the Chicago Gynecological Society, that any change in the place of publication of THE JOURNAL, at this time, will be detrimental to the interests of THE JOURNAL as well as to those of the Association, and be it further

Resolved, That the delegates elected from this Society to the next meeting of the Association be duly instructed to oppose in every legitimate manner such removal.

(Signed) BAYARD HOLMES,
HENRY T. BYFORD,
HENRY P. NEWMAN,
FRANKLIN H. MARTIN,
Committee.

To the Editor:—I have watched with considerable interest the lengthy and numerous discussions which have been presented in your columns in regard to the proposed removal of THE JOURNAL to Washington. I cannot see wherein any advantage whatever would accrue to THE JOURNAL by such a change in its location. The American Medical Association is not a sectional body; or if it is open to the charge of sectionalism at all, as some may maintain, it certainly is not an Eastern organization. The greatest loyalty to its integrity, honor and development, cannot be claimed by the medical profession of the States East of the Alleghany mountains, as a body. This remark is not intended to reflect in the least upon the illustrious services of a large mumber of Eastern physicians without whose coöperation the American Medical Association would not be what it is to-day. Nevertheless the fact as stated cannot be successfully challenged.

THE JOURNAL was born and has been reared in the West. And while it may not have become all that its promoters could wish it to be, yet the assumption that it could have done better, or even as well, any place else is entirely gratuitous. Unlike the Association THE JOURNAL must have a habitat; and, irrespective of any other consideration, it should be located somewhere near the geographical centre of the distribution of the membership of the Association. This might be a reason for moving it farther West than Chicago if such another centre could be found in that direction, but certainly is an objection to its removal Eastward. It would make a difference of at least one day in its delivery to all points West of Chicago by removing it to Washington. So much for the geographical question.

In regard to the facilities for journalistic enterprise, Washington is not ahead of Chicago in any single point except the National Library. The Chicago profession is easily the peer of that of Washington. The business interests represented by Washington are scarcely worth mentioning in comparison with those of Chicago. So that whatever advantage might be derived from local business interests by the advertising department, which is certainly an important feature in the medical journal of to-day, would all be in favor of Chicago.

Those who are inclined to criticise the status of THE JOURNAL, and the grade of its contributions should remember that as an organ of an Association meeting once a year it is placed at an enormous disadvantage. Papers written and read at the annual meeting are scattered through the fifty-two weekly issues of THE JOURNAL, half of them being more than six months and many of them nearly one year old before they appear. In this age of enormously rapid progress many papers and facts grow stale or obsolete in much less time than that. Besides this it is impracticable for the officers of Sections to exercise any discriminating judgment in regard to what shall be placed upon the program. And while the general standard may be, and I believe is creditable, and in many instances ranking very high indeed, there must necessarily be an unfortunately large proportion of rubbish mixed with it. These are difficulties not peculiar to Chicago, but simply peculiar to this method of conducting a journal in the interests of an organization which meets only once a year. It seems to me that we should set ourselves to work in some way to remedy the defects of THE JOURNAL inherent not in its location or editorial management, both of which are creditable in a high degree, but rather dependent upon the peculiar circumstances under which it is published.

G. W. MCCASKEY, M.D.

26 W. Wayne St., Fort Wayne, Ind., Feb. 16, 1891.

To the Editor:—As a member of the Association, I have carefully read and compared the various reasons assigned for the removal of THE JOURNAL, or for continuing its publication in Chicago, wishing, in casting my vote, to do so only after mature consideration.

It would occupy too great space to review the pros and cons—the arguments offered on both sides of the question—those of Dr. Solis-Cohen's removal article, so ably replied to by Harold N. Moyer, M.D., and Harvey Reed, M.D.; the spicy and patriotic non-removal vote of E. Chenery, M.D.; besides various other articles appearing in THE JOURNAL under the heading: "Shall THE JOURNAL, be Removed to Washington?"

Permit me, on so appropriate an occasion, to offer the tribute of my sincere esteem to Dr. E. Chenery, for the display of such unbiased and patriotic sentiments as expressed in his letter to THE JOURNAL of January 27. Certainly, if Pope was a contemporary with Dr. Chenery, he would have found an exception to the doubt expressed in the lines:

> "Where is the man who counsel can bestow,
> Unbiased or by favor or by spite."

Please record my vote *against* removing THE JOURNAL from Chicago, and *especially* against removal to Washington.

"Come, your reason, Jack, your reason."

While my reasons may not be "as plenty as blackberries," there being no compulsion, as in Sir John's case, I will simply urge the objection to Washington, on strictly sanitary and hygienic reasons.

I respectfully call the attention of the Trustees of the Association to page 867, "Da Costa's Medical Diagnosis," seventh (last) edition, line 17 to line 39.

Under article "Fevers," calling attention to the effects of malaria in simulating acute meningitis, Prof. Da Costa states that the patient had spent part of his summer vacation in the *marshy* neighborhood of Washington—the cerebral symptoms arising in which case so simulated acute meningitis, that it was only through the use of the quinine treatment that a differential diagnosis could be arrived at.

In this connection, one of the most prominent scientific members of the medical profession in the United States, in an address before the British Medical Association, not many years ago, in speaking of the deleterious effects of malaria upon the human system, declared that malaria was antagonistic to high mental culture, or words to that effect.

I think that for the successful publication of THE JOURNAL, it should be kept as far as possible from all marshy or malarial centres, that the intellectual faculties of the editor, publisher and type-setters, *et hoc genus omne*, connected with it, may enjoy the full scope to be attained only in a pure atmosphere, uncontaminated by antagonistic intellectual influences. "*Stare decisis, et non quieta movere*," is a law maxim it would be well to bear in mind, in considering the question of the *locus in quo* for THE JOURNAL.

C. D. OWENS, M.D.,
Pres. Louisiana State Medical Society.

Eola, La., February 16, 1891.

To the Editor:—As a member of the American Medical Association I wish to record my name "with the crowd" and say: Let the place of publication remain where it is. I think, with Dr. John M. Batten, that it should remain in its *native habitat*.

H. C. FAIRBANK, M.D.

Flint, Mich., Feb. 20, 1891.

To the Editor:—If the home of THE JOURNAL must be removed from Chicago, let it come to Galena, Ill. It was the home of Grant, Washburn, Rawlins and other great men. It is far more central than Washington and has eight physicians, equally inexperienced in editorial work with their brethren of the Capital City, and equally full of enthusiasm for the good work.

We of Galena are far from the maddening and demoralizing influence of political parties and their intrigues, and when we come home from our muddy country rides and hang up our splashed overcoats, we can give to our editorial work the full power of our massive intellects.

I think Chicago the proper place for the home of THE JOURNAL, but as I said before, if it must be removed let it come to the central city of Galena, and not to the outer edge of the territory at Washington.

HENRY T. GODFREY, M.D.

Galena, Ill.

To the Editor:—If THE JOURNAL should be moved to Washington City I am fearful much of its life and vigor would be lost. Business activity is contagious, and in Chicago we have the benefit of the stimulus of this kind of an epidemic all the time.

J. T. MCSHANE, M.D.

Carmel, Ind., Feb. 23, 1891.

To the Editor:—Keep THE JOURNAL in the great city of the enterprising West. Chicago is the only city that presents so many advantages for the publication of THE JOURNAL.

J. J. GARVER, M.D.

Indianapolis, Ind., Feb. 23, 1891.

To the Editor:—Permit me, as a member of the American Medical Association since 1877, to interpose my decided opposition to the removal of THE JOURNAL to Washington or anywhere East. From my standpoint I cannot see any good reasons for the change, while to the contrary, many sufficient reasons have already been suggested, by many members from different points of the compass, why it *should not* be removed to Washington, but should remain in the great central interior city of Chicago, where it first saw the light, and where it has served us so well.

J. H. DAVISSON, M.D.

Los Angeles, Cal., Feb. 19, 1891.

To the Editor:—To some men the arguments in favor of Chicago are too obvious and too numerous to require enunciation. Insane or insincere men I have neither time nor inclination to labor with. Yours for Chicago, ten thousand times Chicago!

DONALD MACLEAN, M.D.

Detroit, Mich., Feb. 23, 1891.

MISCELLANY.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from February 14, 1891, to February 20, 1891.

Lieut. Col. Charles C. Byrne, Surgeon, is relieved from duty at Ft. Sam Houston, Tex., and will report in person to the commanding General, Dept. of the Columbia, for duty as Medical Director of that Dept., relieving Col. Bernard J. D. Irwin, Surgeon. Col. Irwin, on being relieved by Lieut. Col. Byrne, will proceed, via San Francisco, Cal., to St. Louis, Mo., and report in person to the commanding General, Dept. of the Missouri, for duty as Medical Director of that Dept., relieving Col. Charles Page, Asst. Surgeon General. Col. Page, on being relieved by Col. Irwin, will report in person to the commanding General, Div. of the Atlantic, for duty as Medical Director of that Division. By direction of the Secretary of War. Par. 6, S. O. 36, A. G. O., Washington, February 13, 1891.

Capt. Louis M. Maus, Asst. Surgeon, is relieved from duty at Ft. Stanton, N. M., and will report in person to the commanding officer, Whipple Bks., Ariz., for duty at that station, relieving Capt. Richard W. Johnson, Asst. Surgeon. Capt. Johnson, on being relieved by Capt. Maus, will report in person to the commanding officer, San Carlos, Ariz. Ter., for duty at that station. By direction of the Secretary of War. Par. 7, S. O. 35, A. G. O., Washington, February 1, 1891.

CORRIGENDUM.

In THE JOURNAL of February 21, page 286, next to the last line in third paragraph, for "*bladder*" read "blades."